

AMS ADVANTAGE[®] Pervasive Data Integrator Training



Presentation Overview

- Introductions
- Course Objectives
- Introduction to Data Integrator
- Conversion and Interface Overview
- DI Map Transformation Examples
- Questions



Introductions

- Name
- Project
- Experience with Data Integrator



Objectives for the Course

- Acquire basic understanding of Data Integrator
 - Familiarity with tools
 - Various options
- Introduction to the process of using DI with the Advantage products
 - Advantage specific uses – documents, tables
 - Advantage examples

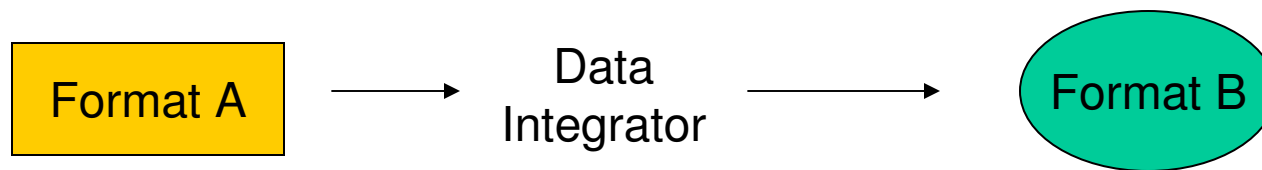


Introduction to Pervasive Data Integrator



Data Integrator

- Data Integrator (DI) is a tool used to convert data from one format to another



- Flexible to allow for many input and output data formats
- Use DI to convert only parts of the data

Benefits of using Data Integrator®

- Data Integrator® Studio functions as a flexible code generator, using rules defined by the developer.
- Supports look ups to tables either within the ADVANTAGE® RDBMS data structure or in the staging / conversion database.
- Makes use of reusable code modules.
- The Rapid Integration Flow Language (RIFL) encompasses functions, statements and keywords that are used in Source/Target Filters, Target Field Expressions, and Code Modules. RIFL mimics VBScript and Visual Basic functions.

File Limitations of Data Integrator®

- Limited to one input file at a time.
 - This one file will be the driver file.
 - All additional information can be loaded into tables and accessed from the Data Integrator® code.
- Only two output files at a time for performance reasons
 - Processed records and Rejected records
 - Generate multiple outputs with multiple program passes.
 - Log File available for error messages.

CGI-AMS DI Usage

- AMS Advantage conversion process uses DI to convert data from 2x to 3x
- Table to Table conversions and document conversions and interfaces
- 3x application accepts data that is in a specified XML format
- DI takes input data and produces an XML file for table to table conversions, document conversions and in-bound interfaces
- DI takes XML and produces an output file for out-bound interfaces



DI License Issue

- Two Separate License files for Studio and Engine
- Open Map Designer
(Help -> About Map Designer -> License)
- C:\winnt\DI800.ini
- C:\winnt\DI800_MAP.ini
- C:\winnt\DI800_ENGINE.ini
- Ask Pervasive for one license file

Issues with DI 8.x

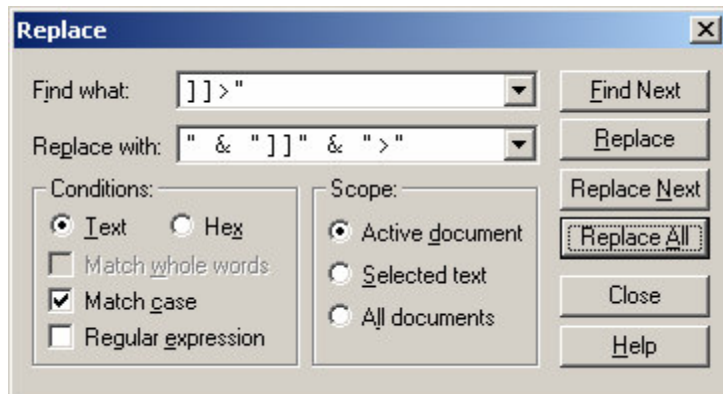
- If you are running DI 8.4 * you will need to run the maintenance patch to fix issues with the baseline conversion software for HR and FIN.
- Patch is available through Pervasive
- DI map designer in 8.x initializes fields differently than DI engine.
- One sets them to 'null' and the other sets it to '0'. Baseline code handles it by checking for both the conditions.
- If the patch is not installed, there will be errors when running the maps
- ftp://polar.datajunction.com/downloads/840/Win32/Maint/Maint8417_20041019ER.exe

Issues with DI 8.x

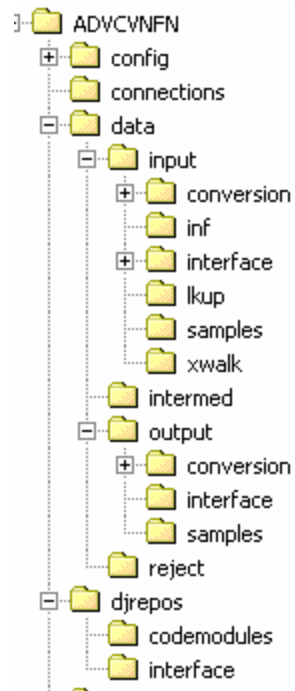
Contd ...



- Open the xml file using Textpad and replace `]]>` with `" & "]]" & ">"`

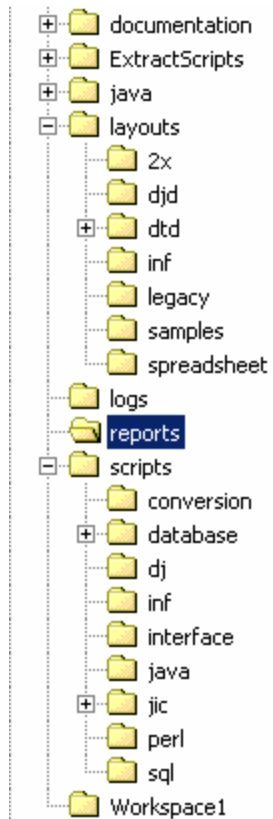


Directory Structure



Directory Structure

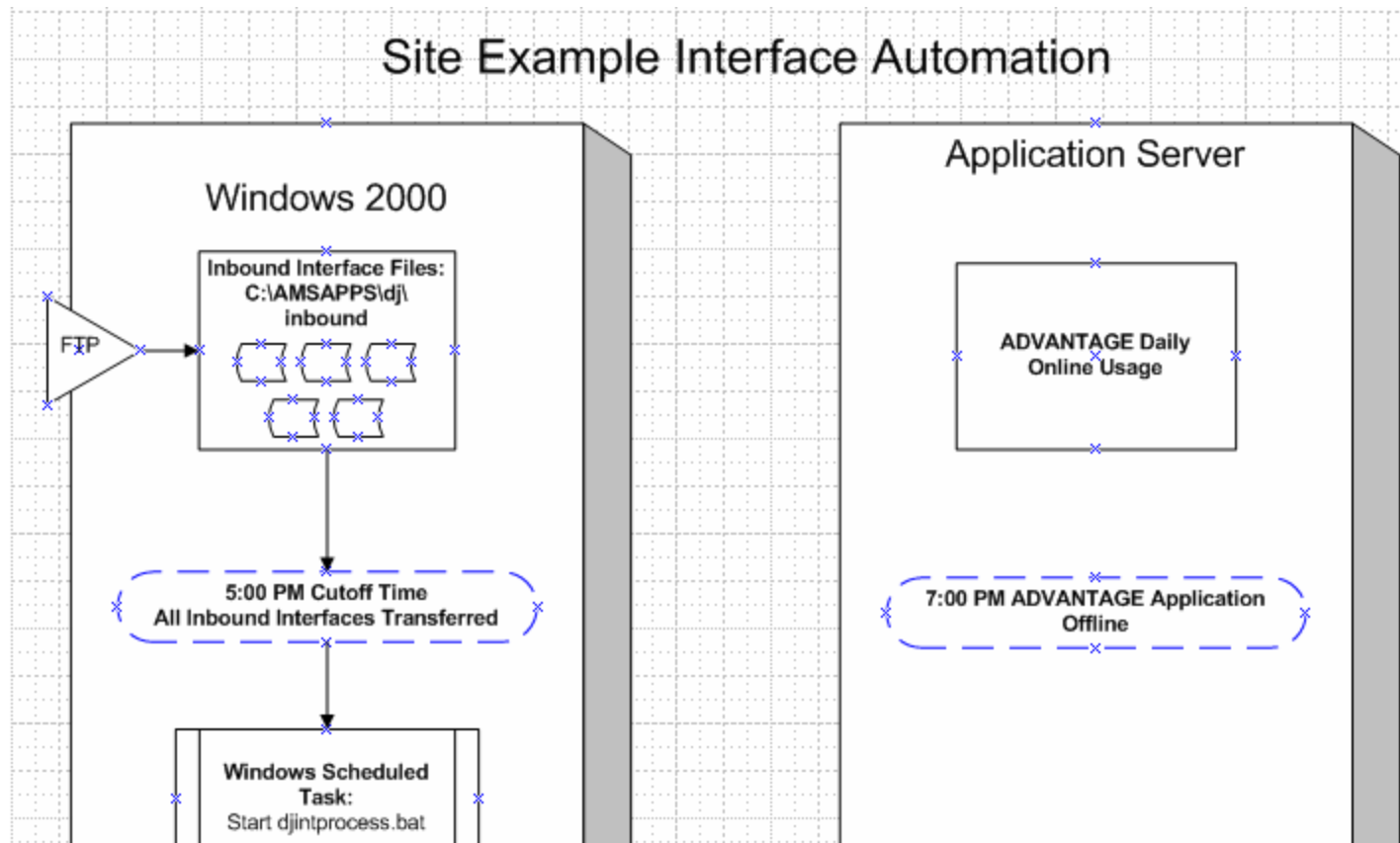
Contd ...



Conversion File Structure

- **CONFIG** - contains .ini files and other support files needed to process the conversion.
- **DATA** - contains the data being pulled into or being pushed out from conversion.
- **INPUT** - holds the files used as input to PDI that were created from the data extracted from the ADVANTAGE FIN 2.2 system.
- **INTERMED** - The ADVANTAGE Financial conversion process does not use this folder
- **OUTPUT** - holds the output files after the PDI process has transformed them.
- **REJECT** - The ADVANTAGE HR conversion process does not use this folder
- **DJREPOS** - contains the PDI internal database, along with the individual maps used as stand-alone items.
- **DOCUMENTS** - contains documentation about the ADVANTAGE FIN 2.2 to ADVANTAGE FIN 3.5 conversion. It includes a master listing of all of the ADVANTAGE FIN 2.2 tables and ADVANTAGE FIN 3.5 tables that are part of conversion.
- **EXTRACTSCRIPTS** - contains all of the scripts needed to extract the data from the ADVANTAGE FIN 2.2 database. For MVS sites, this includes the JCL in their respective JOBLIB, PROCLIB, and PARMCARD folders. For Unix sites, this includes the C-shell scripts and needed parameters in the PARM folder.
- **JAVA** - contains all of the Java code to run the Java Update conversion scripts. The supporting software for running the scripts are located in the ADVANTAGE, COM, CONFIG, JAVADOC, UTILS folders and sub folders. The Java scripts themselves are located in the UTILS folder.
- **LAYOUTS** - contains COBOL layouts that were used to assist in setting up the input file layout. This folder has been included for reference purposes only.
- **LOGS** - contains log files that are created through out the conversion process.
- **SCRIPTS** - contains all of the scripts needed to transform the ADVANTAGE Fin 2.x data in to its corresponding Advantage 3.x format.

Site Specific Process



Install Folders

- C:\ADVCVNFN
- C:\ADVCVNHR



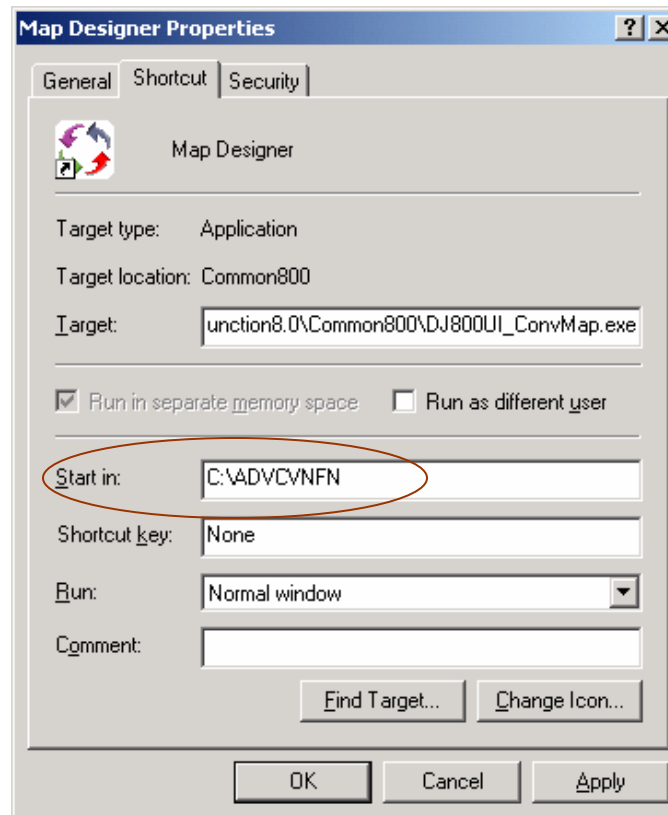
Installation Procedure

- Install DataJunction 8.x
- Install the Patch
- Extract ADVCVNFN.zip onto C:\



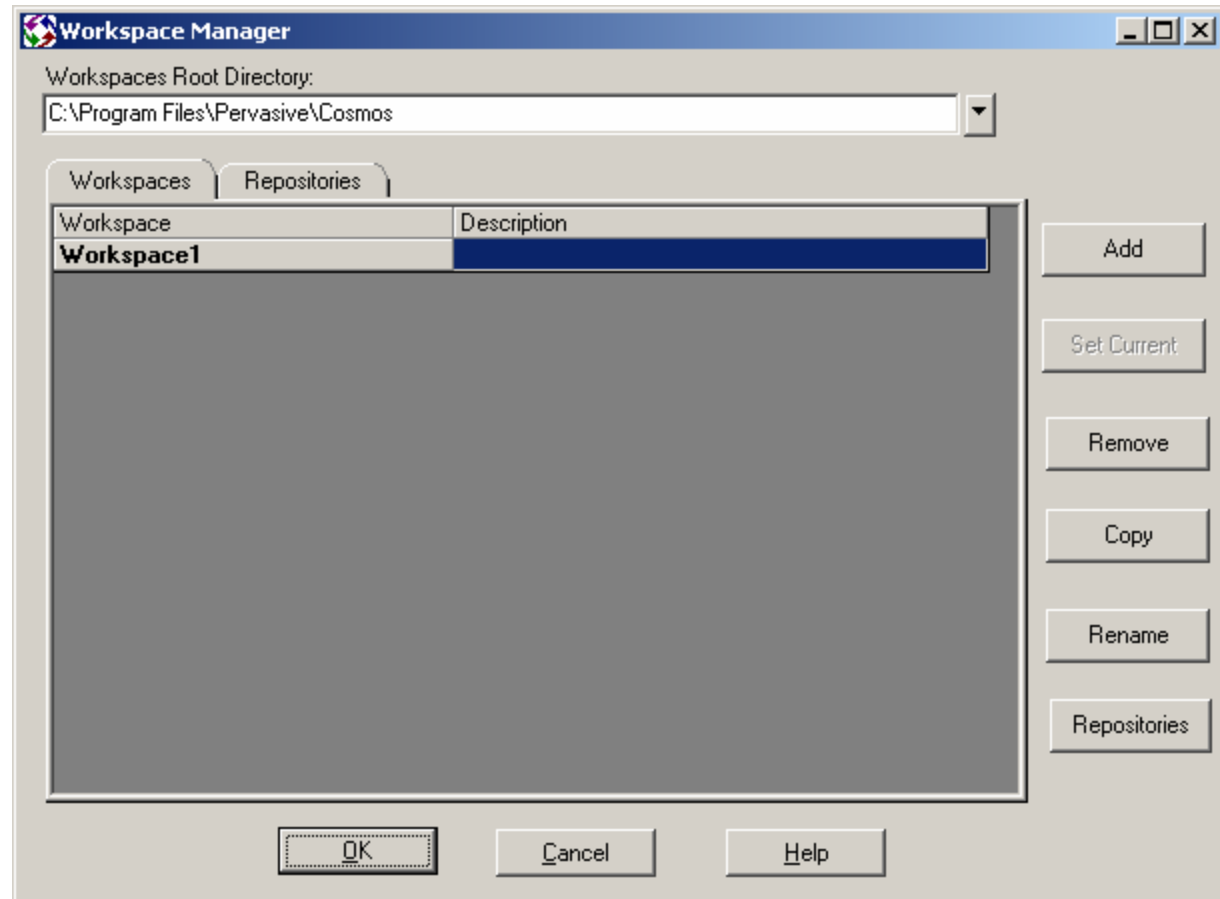
Installation Procedure

- Modify the Map Designer Properties “Start in” path to use relative paths. Set to C:\ADVCVNFN.



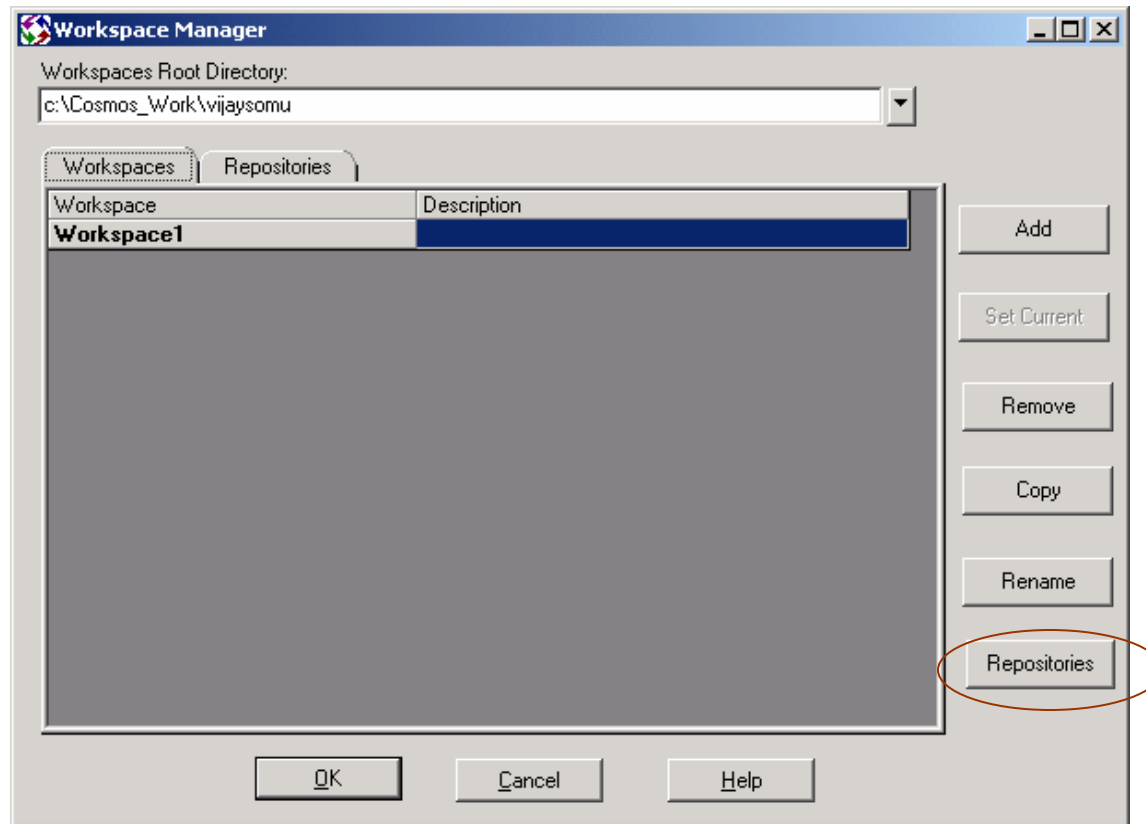
Installation Procedure

- Open the Map Designer and select File → Manage Workspaces...



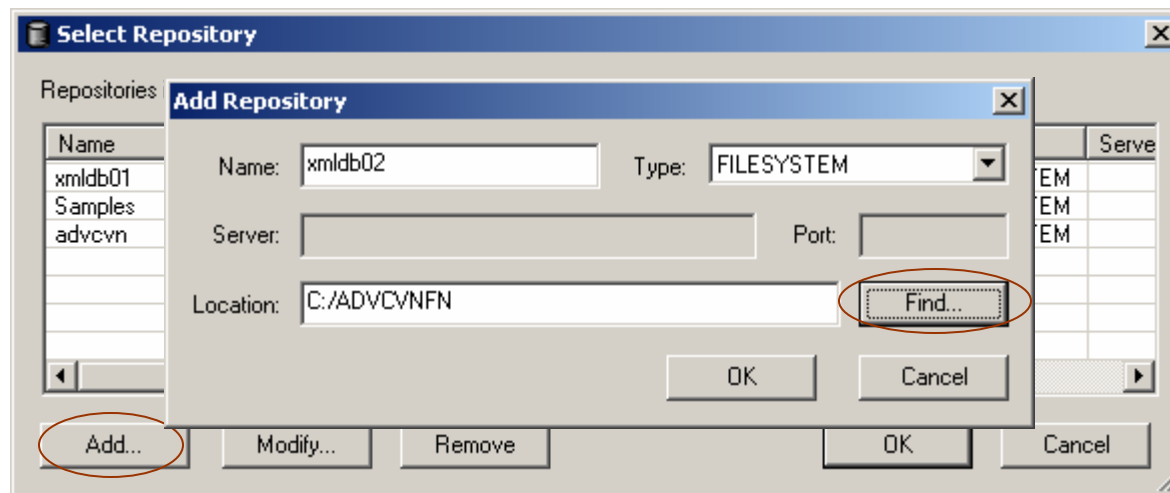
Installation Procedure

- Click on Repositories



Installation Procedure

- Click on Add and then Find to add the C:/ADVCVNFN repository



Installation Procedure

- Install Oracle Enterprise (if needed – else install Oracle Client)
- Install DB2 Client (in required by your site)
- Create an ODBC Connection to the conversion database

- Create a DI Map designer shortcut
- Modify the setenv.bat script in the ADVCVNFN folder
- Modify the conv301.ini file in the ADVCVNFN\config folder
- Modify the script SetEnvironVar.bat in the ADVCVNFN\scripts\inf folder

Conv301.ini

- Configuration file that contains database and java path information. Need to modify to point to correct paths.
 - JAVA_CLASS_PATH : Full path names to files
 - JAVA_LOG_FILE : Full path names to file
 - CONV_DB_CONN : Desire to run software with the support of a conversion database
 - APP_DB_CONN : Desire to run software with the support of an application database
 - CONV_DB_TYPE : Type of Conversion database present
 - APP_DB_TYPE : Type of Application database present
 - CONV_ORACLE : Specific connection info for an Oracle database connection
 - CONV_DB2 : Specific connection info for a DB2 database connection
 - APP_ORACLE : Specific connection info for an Oracle database connection
 - APP_DB2 : Specific connection info for a DB2 database connection

Setbat.env

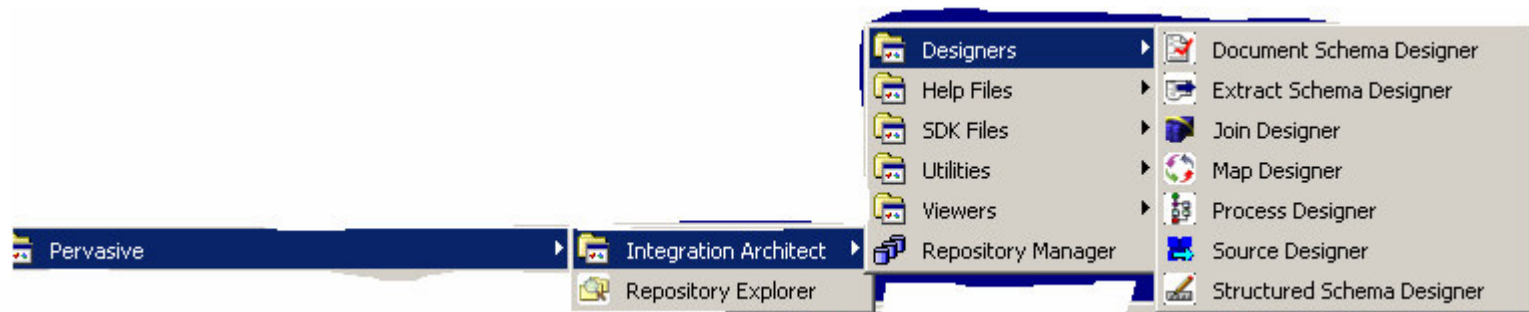
- File that sets the environment to allow bat scripts to be run from any directory
- Sets parameters established in conv301.ini

Data Integrator Overview



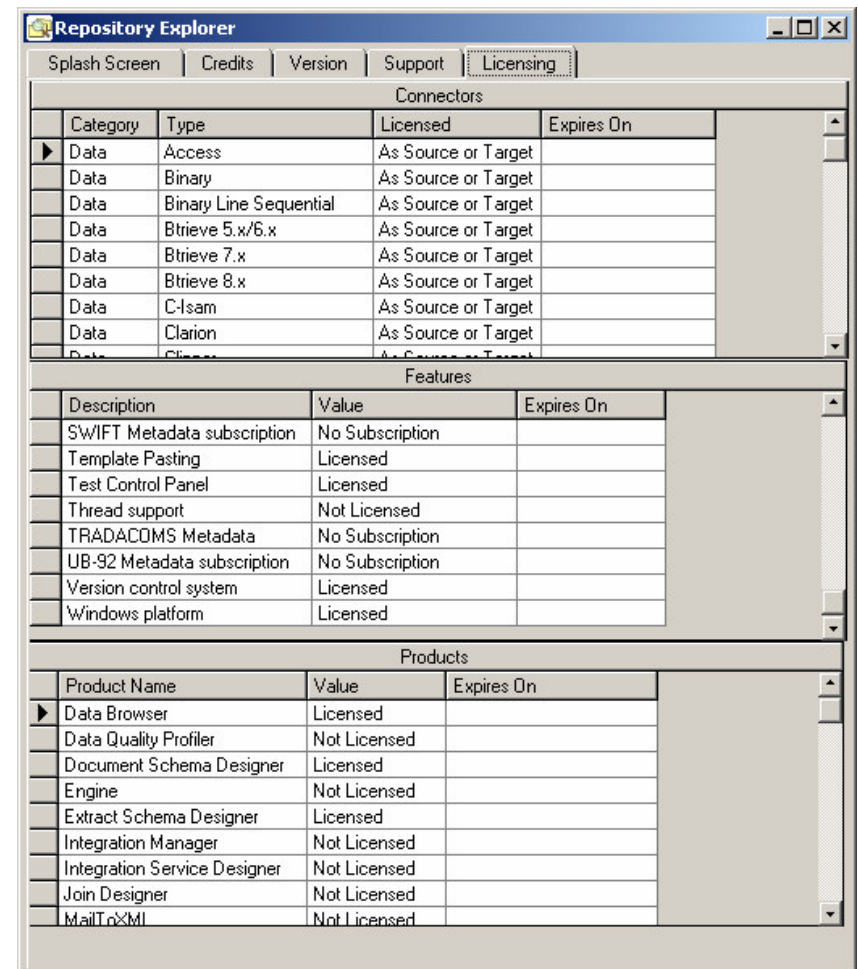
Data Integrator Overview

- Different Parts
 - Repository Explorer
 - Integration Architect
 - Map Designer (Studio)
 - Integration Engine



Repository Explorer

- Navigate the repository
- Navigate to other Integration Architect tools
- Can work with CVS or VSS
- View Licensing information



The screenshot shows the 'Repository Explorer' application window with the 'Licensing' tab selected. The window contains three main sections: Connectors, Features, and Products, each with a table of licensing details.

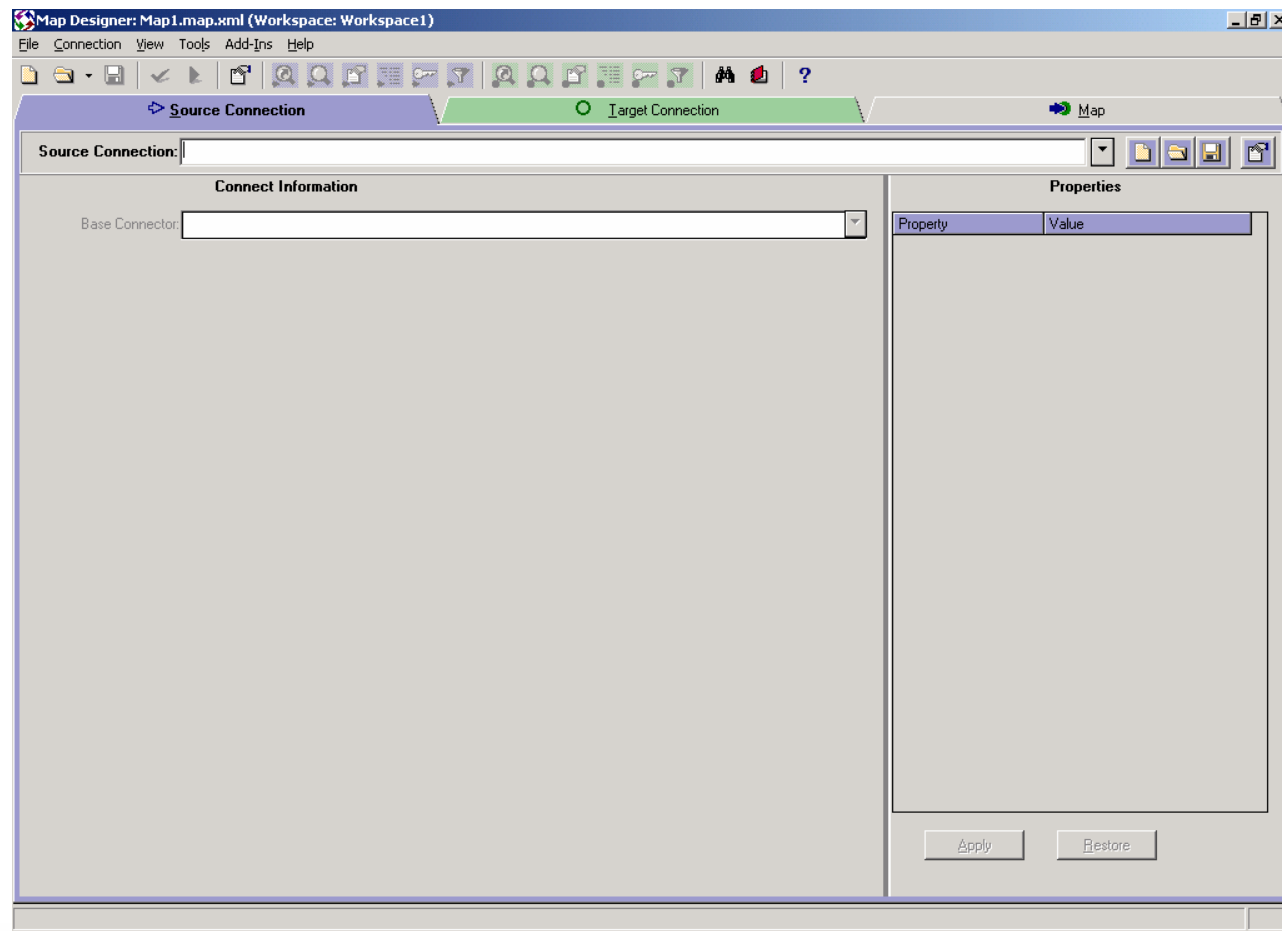
Connectors			
Category	Type	Licensed	Expires On
▶ Data	Access	As Source or Target	
Data	Binary	As Source or Target	
Data	Binary Line Sequential	As Source or Target	
Data	Btrieve 5.x/6.x	As Source or Target	
Data	Btrieve 7.x	As Source or Target	
Data	Btrieve 8.x	As Source or Target	
Data	C-Isam	As Source or Target	
Data	Clarion	As Source or Target	
Data	Clipper	As Source or Target	

Features		
Description	Value	Expires On
SWIFT Metadata subscription	No Subscription	
Template Pasting	Licensed	
Test Control Panel	Licensed	
Thread support	Not Licensed	
TRADACOMS Metadata	No Subscription	
UB-92 Metadata subscription	No Subscription	
Version control system	Licensed	
Windows platform	Licensed	

Products		
Product Name	Value	Expires On
▶ Data Browser	Licensed	
Data Quality Profiler	Not Licensed	
Document Schema Designer	Licensed	
Engine	Not Licensed	
Extract Schema Designer	Licensed	
Integration Manager	Not Licensed	
Integration Service Designer	Not Licensed	
Join Designer	Not Licensed	
MailToXML	Not Licensed	

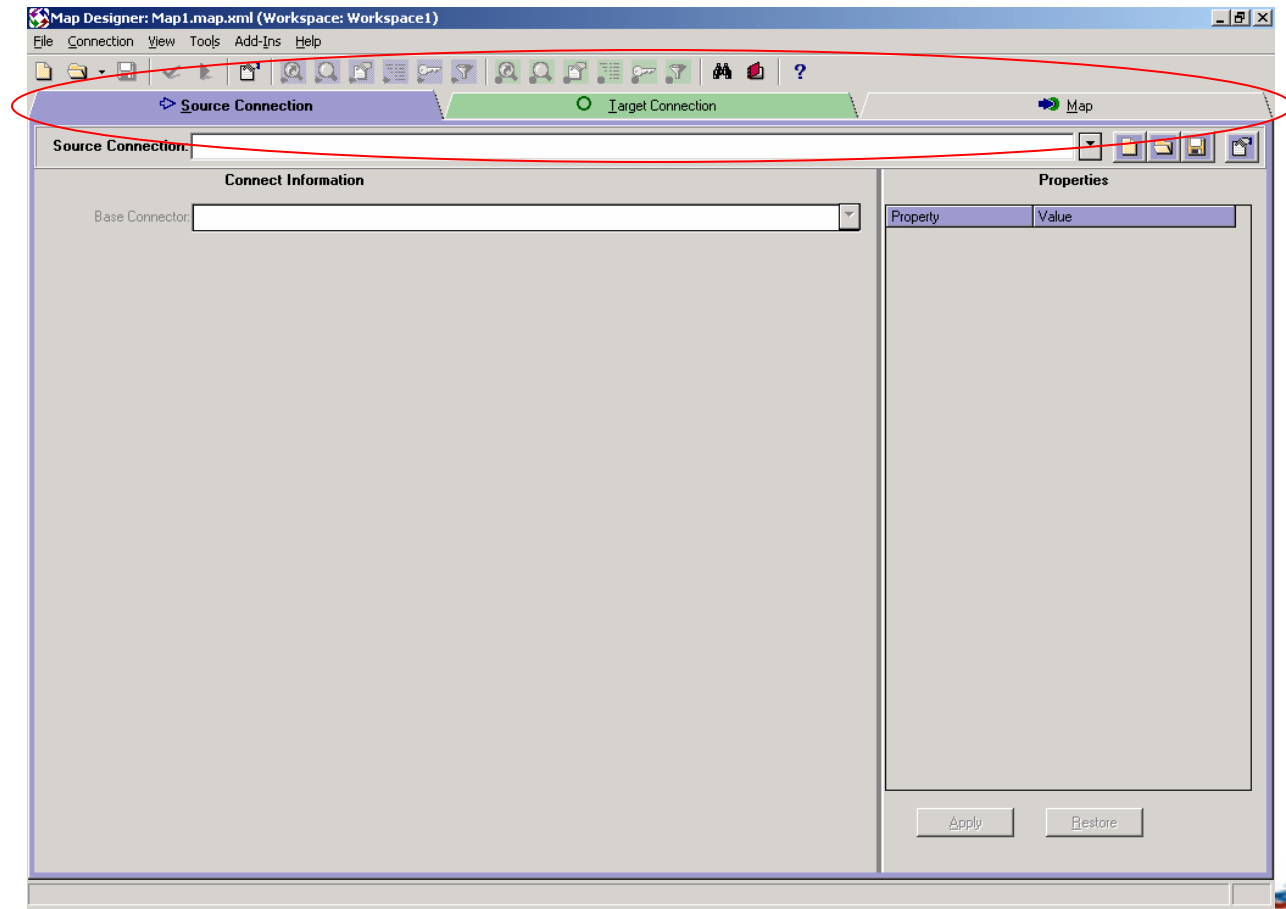
Map Designer

- Construct maps



Map Designer

- Three main tabs
 - Source
 - Target
 - Map

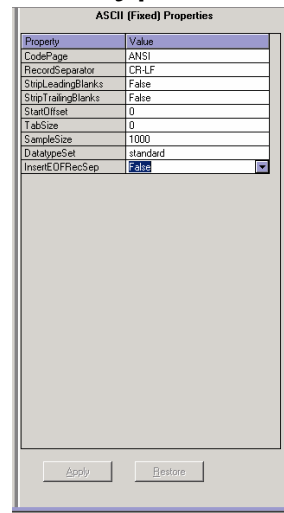


Map Designer - Source

- Source
 - Specifies the “from” of the conversion
 - Many options in source tab
 - Source Type
 - Source File
 - Server Name
 - Source Data Source
 - User ID
 - Password
 - Source Table

Map Designer - Source

- Multiple source properties
 - Dependent on the type of source chosen

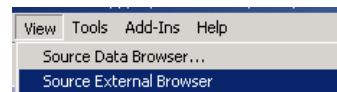


- View the data to ensure the properties are correct

- Internal Data Browser



- External Data Browser



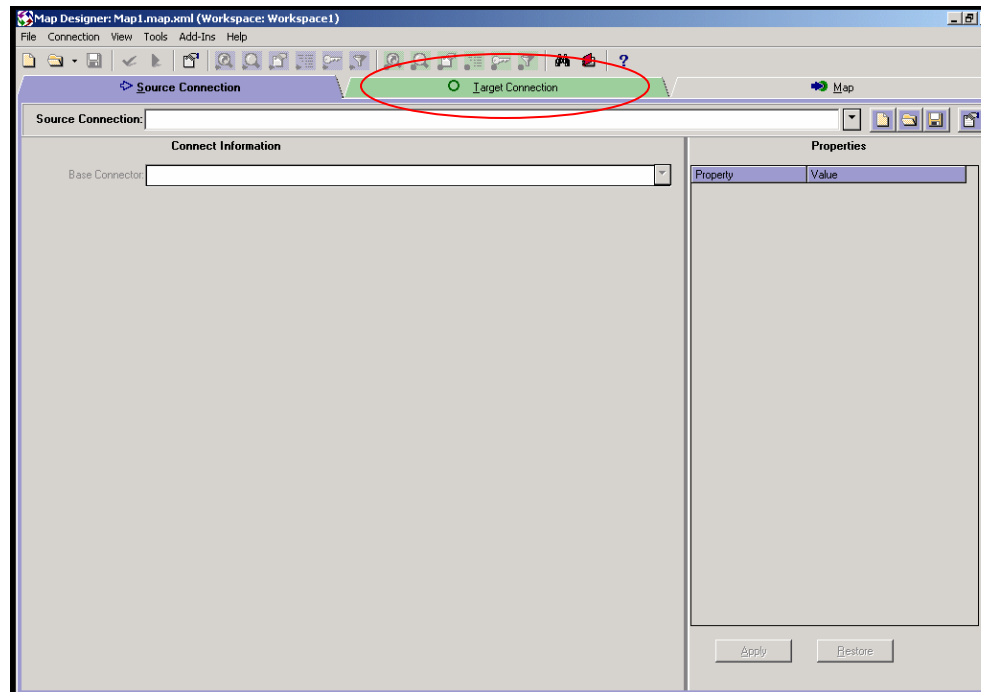
Map Designer - Source

- Source Record Layout
 - Contains file information
 - Length of records and fields
 - Data types of the fields
 - Properties
 - Source Record Types Designer
 - Setup record layout of source file



Map Designer - Target

- Specifies the “to” in the conversion
- Need to set several options
 - Target Type
 - Target File or Target Database and Table
 - Output Mode



Map Designer - Target

- Target Properties

Binary Line Sequential Properties

Property	Value
CodePage	ANSI
RecordSeparator	CR-LF

Apply Restore

Map Designer - Map

- Map divided into four sections

The screenshot displays the Map Designer application window. The interface is divided into four main sections:

- Source tree structure:** Located on the left, it shows a hierarchical view of the source data. The 'EXTENDED-GENERAL-LEDGER' record type is selected, showing its fields and event handlers.
- Source grids:** Located on the right, it displays a table of source fields. The table has columns for Source Field Name, Description, Type, Size, and Content. The fields listed include CONV-IND, LEDGER-ID, MAP-ID, LEDGER-ORDER, COMPONENT-LEVEL, COMPONENT-PARENT, COMPONENT-ORDER, TRANS-GRP-ID, 2X-TRANS-CODE, 2X-TRANS-NUMBER, 2X-LINE-NUMBER, AD30-DOC-CD, AD30-DOC-DEPT-CD, AD30-DOC-UNIT-CD, and AD30-DOC-ID.
- Target tree structure:** Located on the left, it shows a hierarchical view of the target data. The 'ABS-DOC-HDR' record type is selected, showing its fields and event handlers.
- Target grids:** Located on the right, it displays a table of target fields. The table has columns for Target Field Name and Target Field Expression. The fields listed include CONV-IND, LEDGER-ID, MAP-ID, LEDGER-ORDER, COMPONENT-LEVEL, COMPONENT-PARENT, COMPONENT-ORDER, TRANS-GRP-ID, 2X-TRANS-CODE, 2X-TRANS-NUMBER, 2X-LINE-NUMBER, AD30-DOC-CD, AD30-DOC-DEPT-CD, AD30-DOC-UNIT-CD, AD30-DOC-ID, and AD30-DOC-INFO.

Map Designer - Map

- Specify where you want the data to appear in the Target file and the relationships between Source and Target data
- Drag and drop fields from source to match fields in target
- Can create numeric and logical expressions to manipulate the data
- Can select a subset of the total fields to be written to the target file

Map Designer - Map




- Source Tree
 - Displays non-editable information about source connection
 - Navigate through the fields in the recordsource
 - Allows creation of EventHandlers
 - occur during the reading of Source data, and before the transformation and writing of the data.



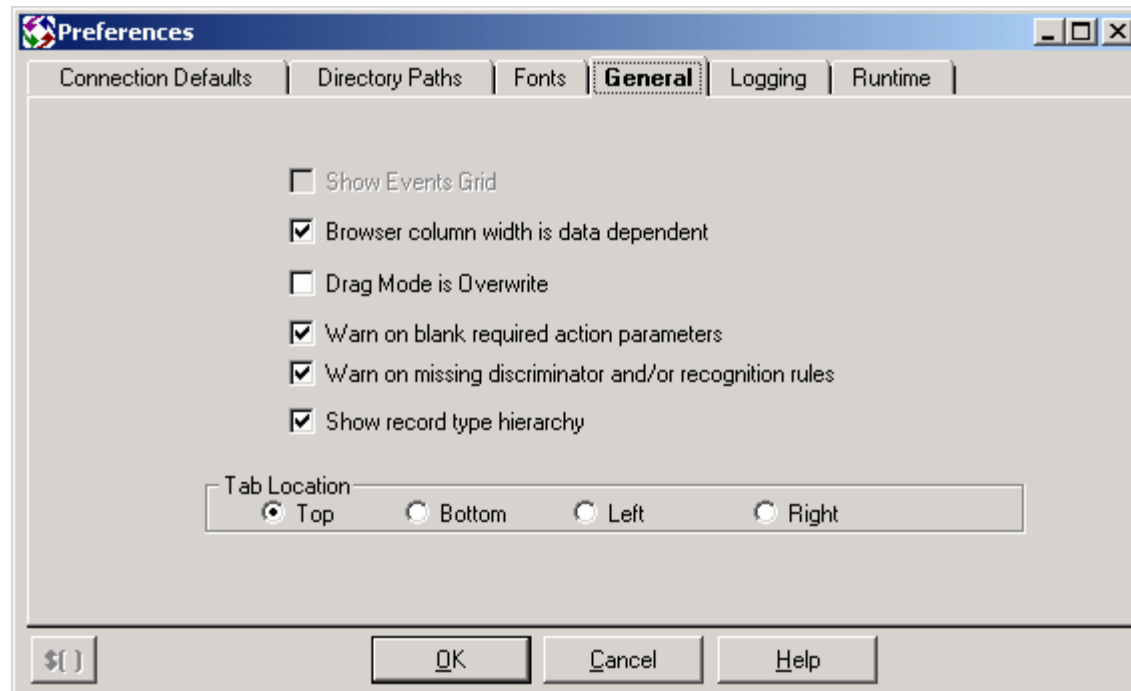
Map Designer – Map

- Target Tree
 - Displays similar information but for target instead of source
 - Properties in the map specify exactly what is written to the target data file
 - Before mapping the target field name and target field expression cells contain no information
 - After mapping target field name and field expression contain the mapped information

Run a conversion

- After all the target information has been mapped the conversion can be run
 - Save and Validate conversion map 
 - Run conversion 
 - Look at target data 

Properties



Source and Target Filtering

Source Filters and Sampling

Source Record Filtering Expressions

* | | ...

Define Source Sample

☒ ALL Records

☐ A RANGE of Records, start with end with .total: records.

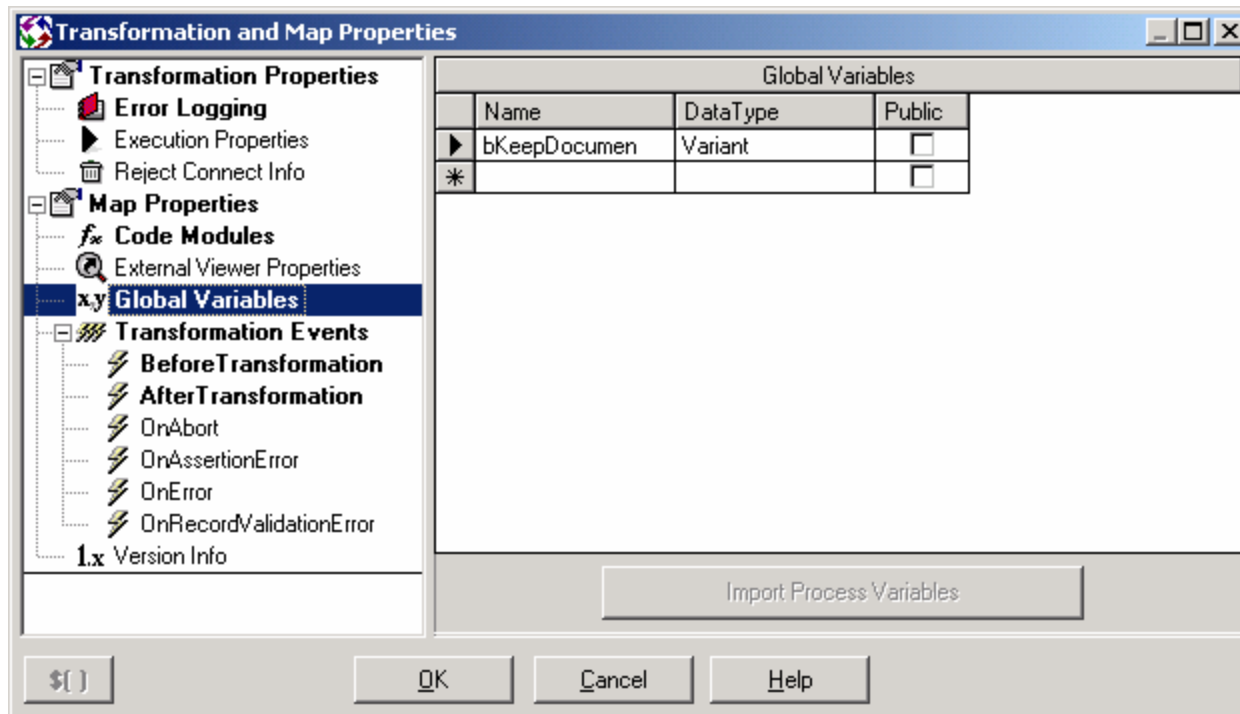
☐ Every Nth Record where "N" is

Sample Size for Filtering:

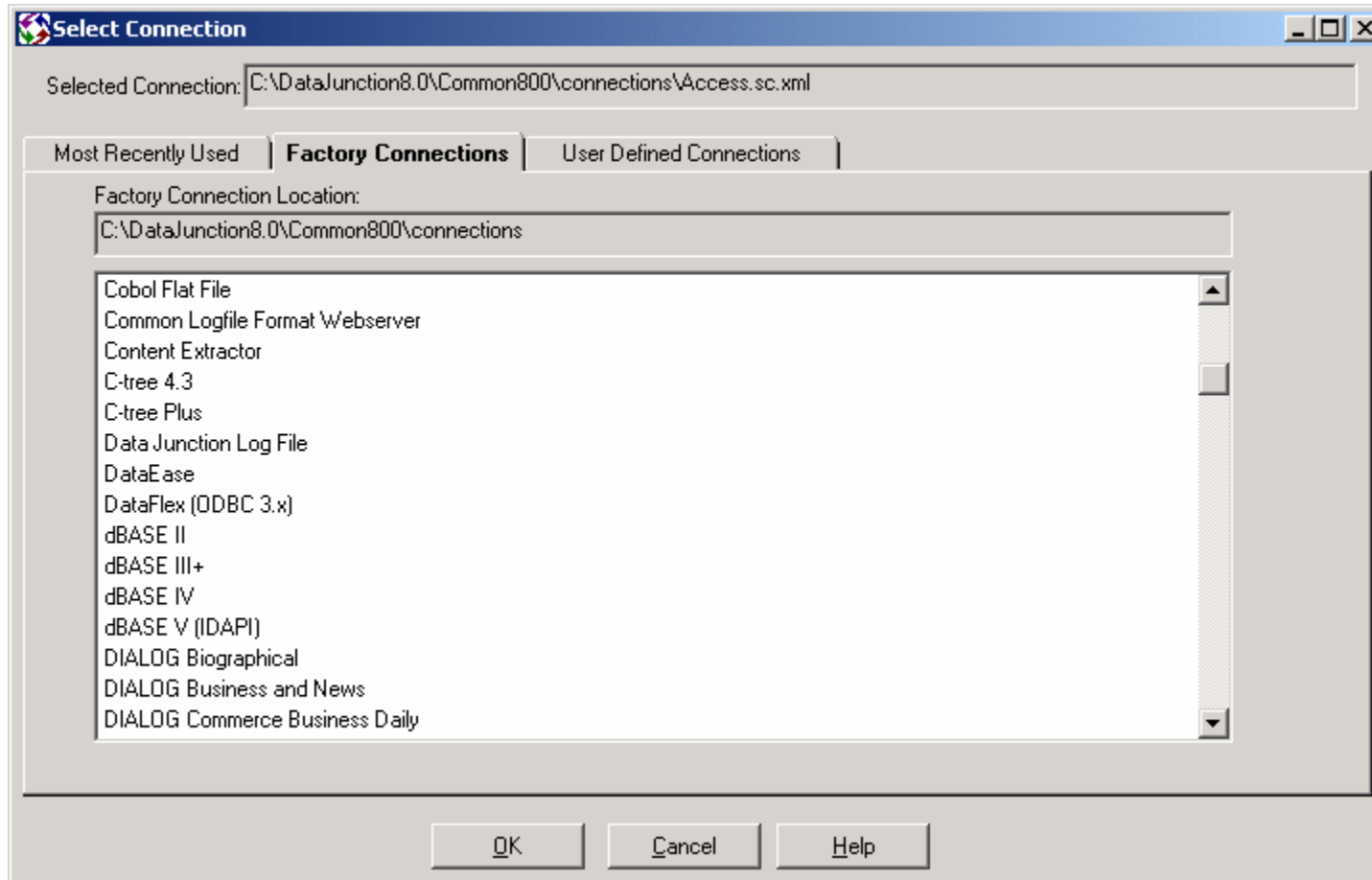
OK Cancel Help

Conversion Properties

- Global Variables



Source and Target Layouts



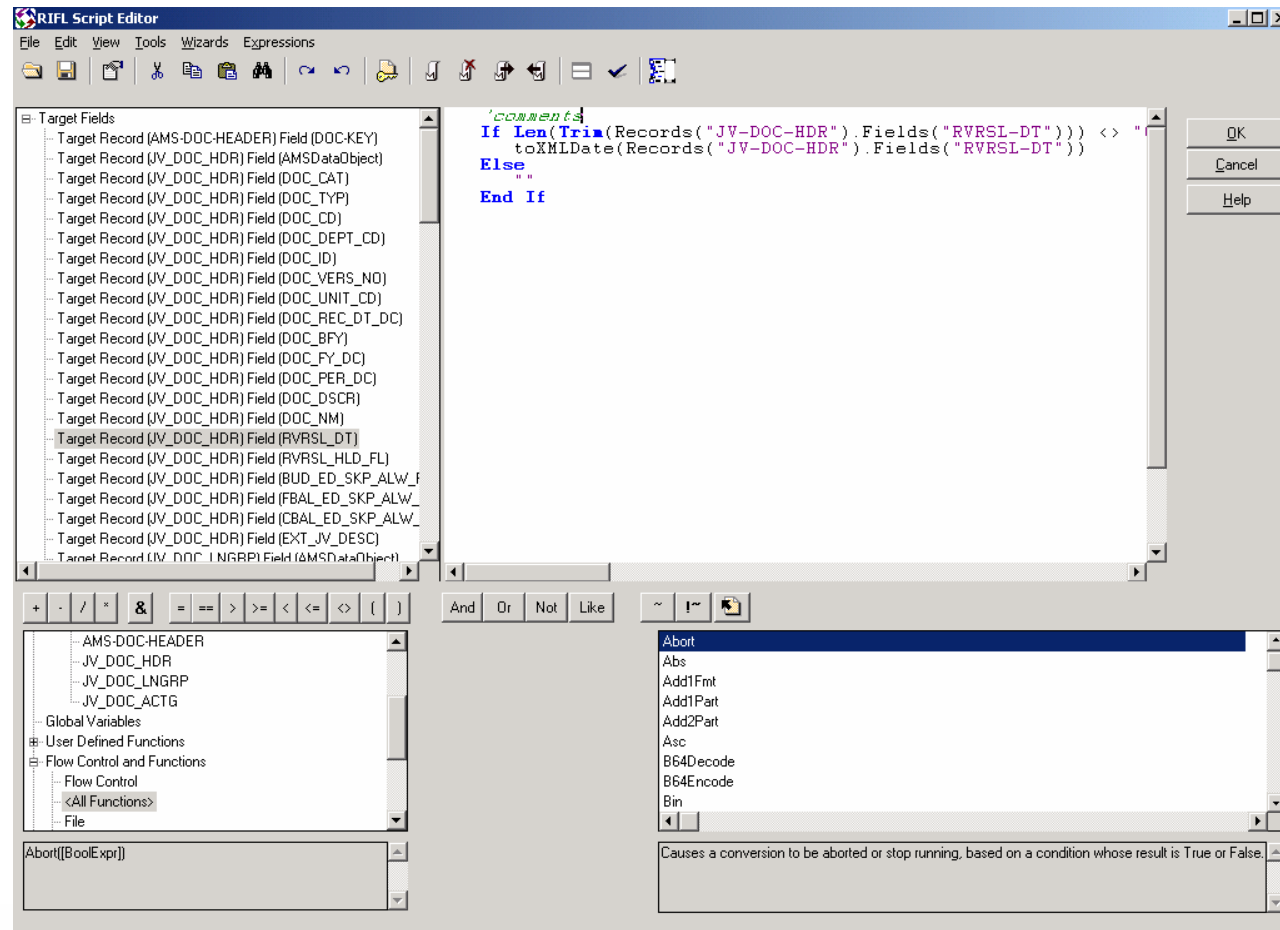
Target Tree – Field Expression

- Click on the arrow to view the Expression Builder

[XML] Target Record Layout: AMS_DOC_XML_EXPORT_FILE						
	Target Field Name	Target Field Expression	Description	Type	Size	Results
1	VERSION	=1		Attribute	16	1
▶ 2	EXPORT_DATE	line= DateConvert("yyyy/mm/dd","yyyy-mm-d" ▼)		Attribute	16	2004-06-09 17:40:26.000000
3	AMS_DOCUMENT	=		Record		<null>
*						

Expression Builder

- Allows expressions for fields to be written



Expression Builder

- Validate expressions
- Show expression tree
- Operator buttons
- Field names

Expression Builder

- Font color represents type of information
 - key words are bold Blue
 - default text and background are black,
 - comments are green
 - quoted text is purple



Conversion Properties

- Set Conversion properties



Transformation and Map Properties

Transformation Properties

- Error Logging
- Execution Properties
- Reject Connect Info

Map Properties

- Code Modules
- External Viewer Properties
- Global Variables
- Transformation Events
 - BeforeTransformation
 - AfterTransformation
 - OnAbort
 - OnAssertionError
 - OnError
 - OnRecordValidationError
- 1.x Version Info**

Map Revision

Major: 1 Minor: 5

Author Name: CGI-AMS

Description: This conversion map will read the Fund 2.x asc file and R_FUND 3x xml.

Creator: CGI-AMS Date Created: 1/12/2005 10:17:56 PM

Buttons: \$(), OK, Cancel, Help

Conversion Properties

- Set various properties used throughout the conversion
 - Version info – allows traceability of versions of conversions
 - Conversion Events – events related to entire conversion
 - Code Modules – external code modules that can be called from within the conversion

Source Event Precedence

- BeforeTransformation events
- Source Filter Expressions (for each record)
- Source Sort (for each record)
- Source Filter Range (for all records)
- BeforeFirstRecord (Source)
- BeforeEveryRecord (Source)
- BeforeFirstRecord (Source General)
- BeforeEveryRecord (Source General)

Source Event Precedence Contd ...

- OnAnyDataChange
- OnAllDataChange
- OnDataChange1-5
- AfterFirstRecord (Source)
- AfterEveryRecord (Source)
- AfterFirstRecord (Source General)
- AfterEveryRecord (Source General)
- On End of File (Source General)
- AfterTransformation events

Target Event Precedence

- Mapping Precedence
 - Target General Before Map event
 - Target Record Before Map event
 - Map Action
 - Target Record After Map event
 - Target General After Map event

Target Event Precedence Contd ...

- Put Precedence
 - Target General Before Put Record event
 - Target Record Before Put Record event
 - Put action
 - Target Record After Put Record event
 - Target General After Put Record event

Target Event Precedence Contd ...

- Error Precedence
 - Expression-level Error (i.e., On Error Goto)
 - Source Record Error OR Target Record Specific Error
 - Source General Error OR Target General Specific Error
 - Target Record OnError
 - Target General OnError
 - Transformation-level Error

Events

- Event Handlers

- Actions can be triggered at virtually any point in the conversion process

- ClearMapPut Record - The Target record buffer is cleared, Target field expressions are executed, and the resulting data is written out to the Target file
 - Execute – Runs an expression

Basic File to File Conversion

- Input file – Title.txt

```
INACT 1950010199999999INACTIVE INACTIVE
1000 2003020299999999ADMINISTRATIVE TECHNICIAN I ADM TECH I
1000 2001010720030201ADMINISTRATIVE TECHNICIAN I ADM TECH I
1000 2000100120010106ADMINISTRATIVE TECHNICIAN I ADM TECH I
1000 2000010920000930ADMINISTRATIVE TECHNICIAN I ADM TECH I
1000 1000010001000001ADMINISTRATIVE TECHNICIAN I ADM TECH I
```

- Desired output – Titles.txt

```
INACT 80499898_@_INACT_@_INACTIVE_@_INACTIVE_@_@_N_@_F_
1000 79969797_@_1000_@_ADMINISTRATIVE TECHNICIAN I_@_ADI
1000 79989892_@_1000_@_ADMINISTRATIVE TECHNICIAN I_@_ADI
1000 79998998_@_1000_@_ADMINISTRATIVE TECHNICIAN I_@_ADI
1000 79999890_@_1000_@_ADMINISTRATIVE TECHNICIAN I_@_ADI
1000 80018995_@_1000_@_ADMINISTRATIVE TECH I_@_ADM TECH
1000 80038770_@_1000_@_ADMINISTRATIVE TECH I_@_ADM TECH
1000 80039271_@_1000_@_ADMINISTRATIVE TECH I_@_ADM TECH
1000 80038770_@_1000_@_ADMINISTRATIVE TECH I_@_ADM TECH
```

- Include field separator and removing fields

Basic File to File Conversion

- Input File – House.txt

City	5	3	Blue
Suburb	3	1	Red
City	2	1	White
Suburb	4	3	Brick
Country	10	7	Brick

- Output File – HouseOut.txt

City	Blue	5	3	Good
Suburb	Red	3	1	Good
City	White	2	1	Good
Suburb	Brick	4	3	Good
Country	Brick	10	7	Good

- Rearrange fields and add a field

Exercise

- Input File – House_Extended.txt

```

Virginia      City      5      3      Blue   Driveway
Florida Suburb 3      1      Red    Golf Course
New York     City      2      1      white  Garage
California   Suburb    4      3      Brick  Lake
Washington   Country  10     7      Brick  Farm
    
```

Base Connector: ASCII (Delimited)

Structured Schema:

Source File/URI: .\data\input\examples\HOUSE_EXTENDED.txt

Refresh Connect

ASCII (Delimited) Properties

Property	Value
CodePage	ANSI
RecordSeparator	CR-LF
RecordFieldCount	0
FieldSeparator	tab
FieldStartDelimiter	"
FieldEndDelimiter	"
Header	False
AlternateFieldSeparator	None
StartOffset	0
AutomaticStyling	False
StyleSampleSize	5000
StripLeadingBlanks	False
StripTrailingBlanks	False
FieldIsRecTypeId	False

Exercise

- Output File – House_ExtendedOut.txt

Target Data Browser--> .\data\output\examples\House_ExtendedOut.txt

Masked Text 500 ?

Record No	Features	Color	State	Location	Bedrooms	Bathrooms	Available
1	Driveway	Blue	Virginia	City	5	3	yes
2	Golf Course	Red	Florida	Suburb	3	1	yes
3	Garage	White	New York	City	2	1	yes
4	Lake	Brick	California	Suburb	4	3	yes
5	Farm	Brick	Washington	Country	10	7	yes

Records 1-5

Record No: 1

Page 1 of 1

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Exercise

- Target Properties

Base Connector: ASCII (Delimited)

Structured Schema: [] [] []

Target File/URI: .\data\output\examples\House_ExtendedOut.txt

Output Mode: Replace File/Table

ASCII (Delimited) Properties

Property	Value
CodePage	ANSI
RecordSeparator	CR-LF
FieldSeparator	tab
FieldStartDelimiter	None
FieldEndDelimiter	None
Header	False
FieldDelimitStyle	all
StripLeadingBlanks	True
StripTrailingBlanks	True
TransliterationIn	
TransliterationOut	
MaxDataLen	0

Basic Conversion Steps



Conversion Overview

- ETL Concept
 - ETL stands for Extract, Transformation, and Load.
 - Separates conversion process into three steps.
 - Works well with the ADVANTAGE® applications
 - Extract using DBUTIL (2x)
 - Transformation using Data Integrator®
 - Load using JIC / SysManUtil (3x)



Basic Development Steps - DBUTIL Process

- Use delivered extract scripts to acquire data from 2.x using DBUtil for tables (Ledgers are generated by 2.x system). (DBUTIL is a common utility across all ADVANTAGE® 2.2 supported platforms)
- Other extract utilities can be used as long as files are generated mimicking the DBUTIL layout.
- Acquire the input file(s) from 2x system

Basic development process – Other interfaces

- Extract data from system
- Get layout
- Use DI to map data in 2x
- Use DI to map data in 3x
- Use the Infrastructure maps



DI Map Perform Transformation

- Prepare Mapping
- Mapping: Source
- Mapping: Target
- Event Handlers
- Miscellaneous
- Run Conversion
- Build the batch file
- Load xml through JIC / sysmanutil

Components Included in Conversion

- Map files (.map.xml)
- Code Module files (.rifl)
- Target Table/Document layouts (.dtd)
- Source files (.txt)
- SQL Statements (.sql)
- Spreadsheets (.xls)
- DOS Batch Scripts (.bat)
- JIC (.DAT)



Basic Development Steps - Load Process using JIC / SysManUtil

- Job Interaction Client (also JIC).
- Short for System Maintenance Utility (also SMU).
- Used for batch processing in ADVANTAGE® 3.x application.
 - Extracts and Loads
 - Document Processing
- Utility used on all supported platforms.
- Batch jobs can be run immediately or scheduled for later.

Prepare Mapping



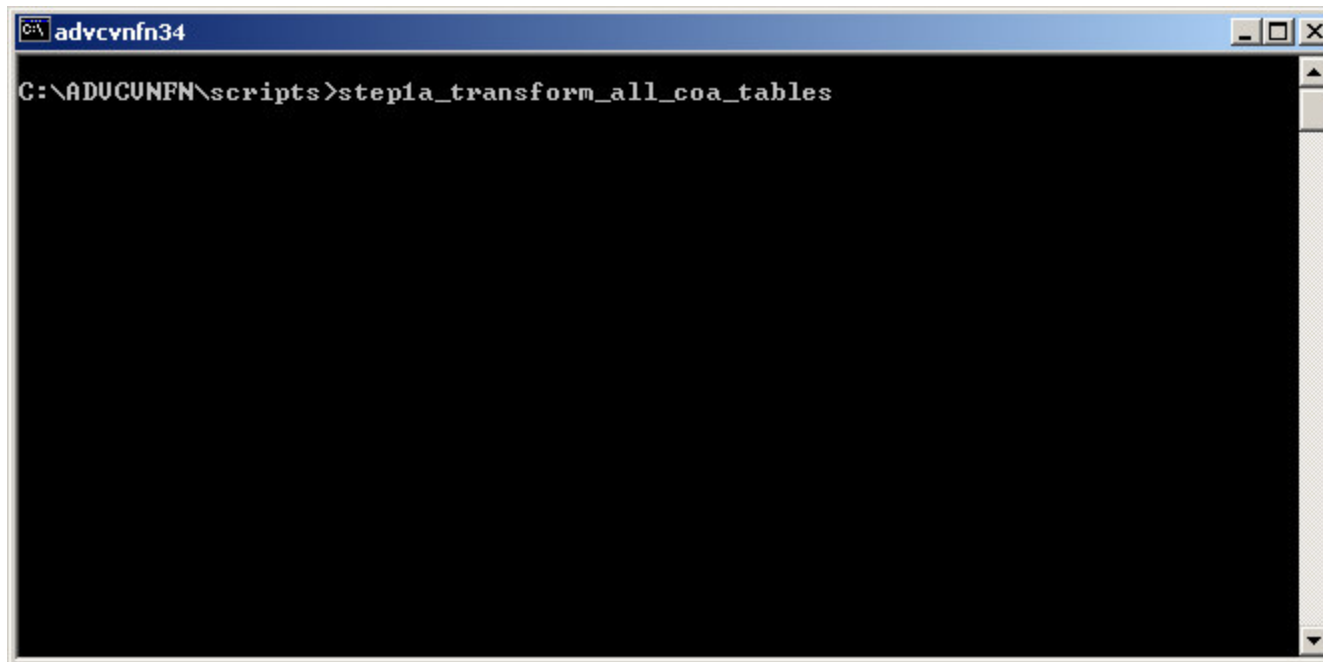
Table to Table Conversion Example

One Step Process:

1. ASCII to XML



Table to Table Conversion Example



```
C:\ADUCUNFN\scripts>step1a_transform_all_coa_tables
```

Table to Table Conversion

STEP 1: ASCII to Xml (Source Tab)

Map Designer: xmldb:ref:///C:/ADVCMFN//djrepos/R_FUND_FUND_2xasc_3xml.map.xml (Workspace: ADVCMFN)

File Connection View Tools Add-Ins Help

Source Connection: []

Binary Line Sequential Connect Information

Base Connector: Binary Line Sequential

Structured Schema: []

Source File/URI: .\data\input\FUND.asc

[Refresh] [Connect]

Binary Line Sequential Properties

Property	Value
CodePage	ANSI
StartOffset	0
RecordSeparator	CR-LF
MaxRecordLength	32700
OccursPad	None
ShortLastRecord	False

Source Connection Target Connection Map

Select or Enter the Source File Name

Table to Table Conversion

STEP 1: ASCII to XML (Target Tab)

Map Designer: xmldb:ref:///C:/ADVCNFN//djrepos/R_FUND_FUND_2xasc_3xml.map.xml (Workspace: ADVCNFN)

File Connection View Tools Add-Ins Help

Target Connection: [] [] [] [] []

XML Connect Information

Base Connector: XML []

Structured Schema: [] [] [] []

Target File/URI: .\data\output\R_FUND.XML []

Output Mode: Replace File/Table []

[Refresh] [Connect]

XML Properties

Property	Value
Encoding	ISO-8859-1
ByteOrder	Auto
WriteXMLDecl	False
WriteDTD	None
DTDFile	
ProcessingInstructions	
InternalSubset	
DoctypeName	
WriteEmpty	True
WriteEmptyAttr	True
RetainRecordOrder	False
Formatted	True

[Apply] [Restore]

[Source Connection] [Target Connection] [Map]

Table to Table Conversion Example Contd ...

STEP 1: ASCII to XML (Map Tab)

Map Designer: xmldb:ref:///C:/ADVCYNFN//djrepos/R_FUND_FUND_2xasc_3xml.map.xml (Workspace: ADVCYNFN)

File Connection View Tools Add-Ins Help

Source (Binary Line Sequential) Source Record Type: FUND

	Source Field Name	Description	Type
*	<all fields>		
1	FISC-YEAR		Display
2	FUND		Display
3	FUND-TYPE		Display
4	FUND-NAME		Display
5	FUND-SHORT-NAME		Display
6	EXP-BUD-CTL-OPTION		Display
7	REV-BUD-CTL-OPTION		Display
8	APPR-CTL-OPTION		Display

Record Types

AMS_DATAOBJECT_XML_EXPORT_FILE

R_FUND

(XML) Target Record Type: R_FUND

	Target Field Name	Target Field Expression
1	AMSDataObject	= "Y"
2	FY	=
3	FUND_CD	=
4	FUND_NM	=
5	FUND_SH_NM	=
6	ACT_FL	=
7	EFBGN_DT	=

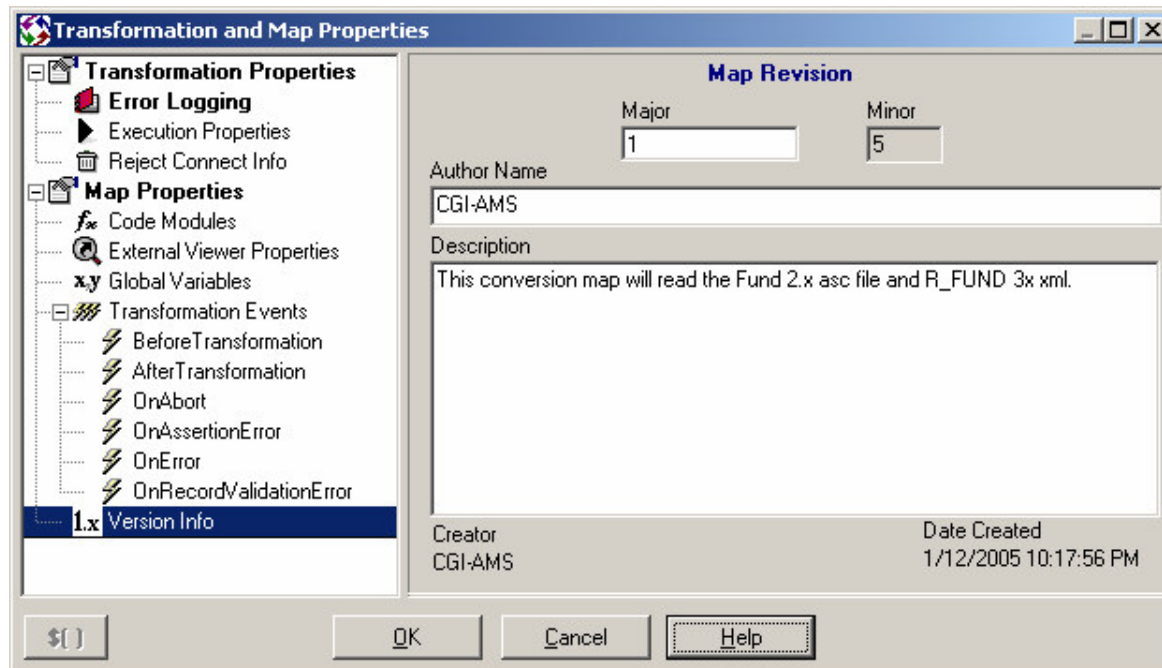
Source Connection Target Connection Map

INS

Table to Table Conversion Example Contd ...

STEP 1: ASCII to XML (Events Handlers), Transformation & Map Properties

All Source Event Actions					
Record Name	Event Name	No.	Action	Parameters	
FUND	AfterEveryRecord	1	ClearMapPut Re	{Target}.{R_FUND}.0.0.{false}	
FUND	AfterEveryRecord	2	ClearMapPut Re	{Target}.{FY}.0.0.{false}	
FUND	AfterEveryRecord	3	ClearMapPut Re	{Target}.{FUND_CD}.0.0.{false}	
FUND	AfterEveryRecord	4	ClearMapPut Re	{Target}.{FUND_NM}.0.0.{false}	
FUND	AfterEveryRecord	5	ClearMapPut Re	{Target}.{FUND_SH_NM}.0.0.{false}	



The dialog box is titled "Transformation and Map Properties". It has a tree view on the left and a main configuration area on the right.

Left Tree View:

- Transformation Properties
 - Error Logging
 - Execution Properties
 - Reject Connect Info
- Map Properties
 - Code Modules
 - External Viewer Properties
 - Global Variables
 - Transformation Events
 - BeforeTransformation
 - AfterTransformation
 - OnAbort
 - OnAssertionError
 - OnError
 - OnRecordValidationError
 - 1.x Version Info

Right Configuration Area:

- Map Revision:** Major: 1, Minor: 5
- Author Name:** CGI-AMS
- Description:** This conversion map will read the Fund 2.x asc file and R_FUND 3x xml.
- Creator:** CGI-AMS
- Date Created:** 1/12/2005 10:17:56 PM

Buttons: \$(), OK, Cancel, Help

Table to Table Conversion Example Contd ...

Output:

```
TextPad - [C:\ADVCMFN\data\output\R_FUND.XML]
File Edit Search View Tools Macros Configure Window Help

R_FUND.XML

1 <AMS_DATAOBJECT_XML_EXPORT_FILE VERSION="1.0" EXPORT_DATE="2005-01-19 16:03:44.000000">
2   <R_FUND AMSDataObject="Y">
3     <FY Attribute="Y"><![CDATA[1995]]></FY>
4     <FUND_CD Attribute="Y"><![CDATA[100]]></FUND_CD>
5     <FUND_NM Attribute="Y"><![CDATA[General Fund Old]]></FUND_NM>
6     <FUND_SH_NM Attribute="Y"><![CDATA[Old]]></FUND_SH_NM>
7     <ACT_FL Attribute="Y"><![CDATA[True]]></ACT_FL>
8     <EFBGN_DT Attribute="Y"><![CDATA[Null]]></EFBGN_DT>
9     <EFEND_DT Attribute="Y"><![CDATA[Null]]></EFEND_DT>
10    <CU_CAFR_FL Attribute="Y"><![CDATA[0]]></CU_CAFR_FL>
11    <MJR_FUND_CAFR_FL Attribute="Y"><![CDATA[0]]></MJR_FUND_CAFR_FL>
12    <ALW_BUD_FL Attribute="Y"><![CDATA[True]]></ALW_BUD_FL>
13    <PO_CLSE_ENTD_ACTN Attribute="Y"><![CDATA[3]]></PO_CLSE_ENTD_ACTN>
14    <PORL_MIN_ENTD_AM Attribute="Y"><![CDATA[0.00]]></PORL_MIN_ENTD_AM>
15    <RQ_CLSE_ENTD_ACTN Attribute="Y"><![CDATA[3]]></RQ_CLSE_ENTD_ACTN>
16    <RQRL_MIN_ENTD_AM Attribute="Y"><![CDATA[0.00]]></RQRL_MIN_ENTD_AM>
17    <RE_CLSE_ENTD_ACTN Attribute="Y"><![CDATA[3]]></RE_CLSE_ENTD_ACTN>
18    <RERL_MIN_ENTD_AM Attribute="Y"><![CDATA[0.00]]></RERL_MIN_ENTD_AM>
19    <BANK_CD Attribute="Y"><![CDATA[12]]></BANK_CD>
20    <ACCT_CLSNG_IND Attribute="Y"><![CDATA[3]]></ACCT_CLSNG_IND>
21    <FUND_DSCR Attribute="Y"><![CDATA[Default]]></FUND_DSCR>
22    <CNTAC_CD Attribute="Y"><![CDATA[Null]]></CNTAC_CD>
23    <FCLS_CD Attribute="Y"><![CDATA[null]]></FCLS_CD>
24    <FCAT_CD Attribute="Y"><![CDATA[null]]></FCAT_CD>
25    <FTYP_CD Attribute="Y"><![CDATA[G]]></FTYP_CD>
26    <FGRP_CD Attribute="Y"><![CDATA[null]]></FGRP_CD>
27    <CAFRFTYP_CD Attribute="Y"><![CDATA[Null]]></CAFRFTYP_CD>
28    <DFLT_EFT_BANK_CD Attribute="Y"><![CDATA[12]]></DFLT_EFT_BANK_CD>
29    <PRN_0_AM_CHK_FL Attribute="Y"><![CDATA[0]]></PRN_0_AM_CHK_FL>
30    <MST_BANK_ACCT_CD Attribute="Y"><![CDATA[12]]></MST_BANK_ACCT_CD>
31    <POOL_FUND_FL Attribute="Y"><![CDATA[Null]]></POOL_FUND_FL>
32    <GCA_FUND_FL Attribute="Y"><![CDATA[Null]]></GCA_FUND_FL>
33    <ALW_NEG_BAL_FL Attribute="Y"><![CDATA[Null]]></ALW_NEG_BAL_FL>
34  </R_FUND>
```

Example of JV Doc (INTERFACE)

- Run through how to take extracted data, use Data Integrator to create an XML file, load it into the application using JIC and sysmanutil
- DI Maps that are already created can be used as a starting point
- Documents, for which we do not currently have maps, use an existing map and make changes and 'Save As'

Example of JV Document

- Two maps play a key role in the document conversion process
 - Map 1
 - 2.x format to EXTENDED-GENERAL-LEDGER
 - Map 2
 - EXTENDED-GENERAL-LEDGER to 3.x document format

Example of JV Document

- There are supporting maps
 - DOC_INT_JV_FLEETJV_PREP
 - INF_INT_VALIDATE_LGL
 - DOC_INT_JV_JVA_MAP
 - INF_INT_RM_MAP_FAILURES
 - INF_INT_SORT
 - DOC_INT_JV_JVA_XML
 - INF_INT_DItoADV_xml_xml

JV Document Example

- Walkthrough all the Maps



PREP Step

- DOC_INT_JV_FLEETJV_PREP

Map Designer: xmldbref:///C:/AMSADV34/Utils/ADVCVNFN/djrepos/DOC_INT_JV_FLEETJV_PREP.map.xml (Workspace: Workspace1)

File Connection View Tools Add-Ins Help

Source Connection Target Connection Map

Source Connection:

ASCII (Fixed) Connect Information

Base Connector: ASCII (Fixed)

Structured Schema:

Source File/URI: \\data\input\interface\fleetjv.txt

Refresh Connect

ASCII (Fixed) Properties

Property	Value
CodePage	ANSI
RecordSeparator	CR-LF
StripLeadingBlanks	False
StripTrailingBlanks	False
StartOffset	0
TabSize	0
SampleSize	1000
DatatypeSet	standard
InsertEOFRecSep	False

Apply Restore

View Source Data

- Look at the source data by opening the Source Data Browser

Source Data Browser--> .\data\input\interface\fleetjv.txt

Masked Text 500 ?

Record Types	Record No	Rec	REI	PAGE-1	BAT-TR	BAT-AGEI	BATCH	DOC-TR	DOC-AGENCY	DOI	FILLER	Field Name	Field Contents
<All>	1	IFA	D					JV	125		FSC	TRANS-CC	JV
IFAS-JV-DOCH												TRANS-NU	FS040700001
IFAS-JV-DOCL												RECORD-#	
												RECORD-C	
												RECORD-N	
												FISC-MON	07
												FISC-YEAR	04
												BUDGET-F	04
												DOCUMENT	E
												BUDGET-C	
												DOCUMENT	FLEET043004
												DEBIT-DOI	00000000001000
												CREDIT-DOI	00000000001000
												REVERSAI	
												REVERSAI	
												REVERSAI	
												ACTUAL-D	00000000000000
												ACTUAL-C	00000000000000
												FILLER2	
	2	IFA	L					JV	125		FSC	ACCOUNT	01
												FUND	5010
												AGENCY	125
												XORGANIZ	
												SUB-ORG	
												ACTIVITY	
												OBJ-REV-S	
												SUB-OBJ-S	
												BS-ACCOU	1156
												JOB-NUM	
												REPORTIN	0001
												INTRA-GO	
												INTRA-GO	
												BANK-ACC	
												VEND-PRC	P
												VENDOR-C	BELL420
												VEND-NAK	
												VEND-NAK	
												LINE-DESC	043004MAINTENANCE REPAIRS
												DEBIT-LIN	00000000001000

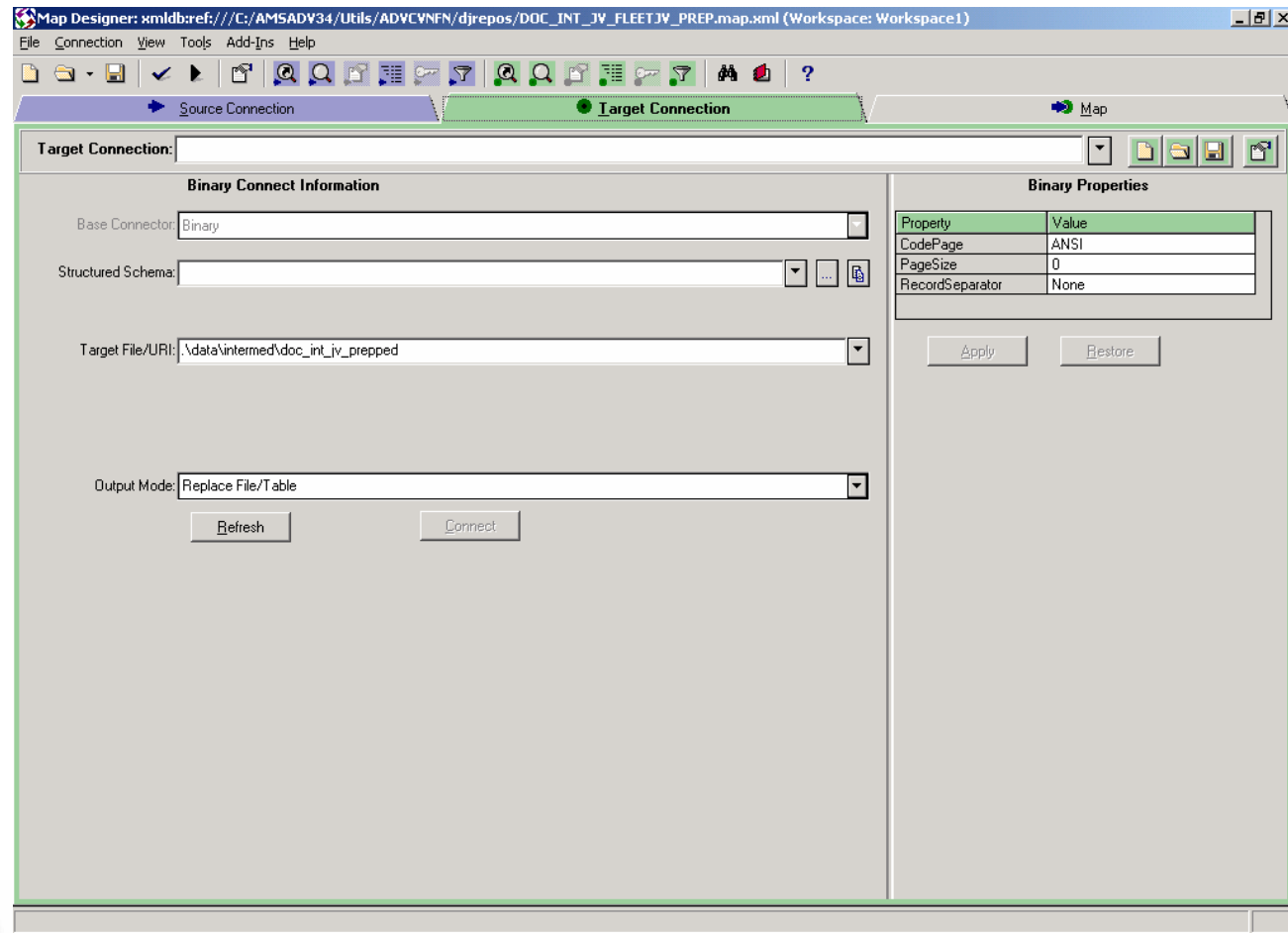
Records 1-500

Record No: 1 Page 1 of ?

GROUP DAT

Target Tab

- Navigate to the Target Tab



The screenshot shows the 'Map Designer' application window with the 'Target Connection' tab selected. The window title is 'Map Designer: xmldbref:///C:/AMSADY34/Utils/ADVCYNFN/djrepos/DOC_INT_JV_FLEETJV_PREP.map.xml (Workspace: Workspace1)'. The menu bar includes File, Connection, View, Tools, Add-Ins, and Help. The toolbar contains various icons for file operations and mapping. The 'Target Connection' tab is active, showing a 'Target Connection:' field at the top. Below this, the 'Binary Connect Information' section contains fields for 'Base Connector' (set to 'Binary'), 'Structured Schema' (with a dropdown and a button), 'Target File/URI' (set to '\\data\\intermed\\doc_int_jv_prepped'), and 'Output Mode' (set to 'Replace File/Table'). There are 'Refresh' and 'Connect' buttons at the bottom of this section. To the right, the 'Binary Properties' section contains a table with the following data:

Property	Value
CodePage	ANSI
PageSize	0
RecordSeparator	None

Below the table are 'Apply' and 'Restore' buttons.

Map Tab

- Navigate to the Map Tab

Map Designer: xmldbref:///C:/AMSADY34/Utils/ADVCYNFN/djrepos/DOC_INT_JV_FLEETJV_PREP.map.xml (Workspace: Workspace1)

File Connection View Tools Add-Ins Help

Source Connection Target Connection Map

Source

- All Fields
- All Event Actions
- Record Types
 - IFAS-JV-DOCH
 - IFAS-JV-DOCH Event Handlers
 - BeforeEveryRecord
 - AfterEveryRecord
 - BeforeFirstRecord
 - AfterFirstRecord
 - Data Change Events
 - IFAS-JV-DOCH Fields
 - IFAS-JV-DOCH Rules
 - IFAS-JV-DOCL
 - ALL Record Type Rules
 - Recognition
 - Validation
 - General Event Handlers

Target

- All Fields
- All Event Actions
- Record Types
 - EXTENDED-GENERAL-LEDGER
 - EXTENDED-GENERAL-LEDGER Event Handlers
 - EXTENDED-GENERAL-LEDGER Fields
 - EXTENDED-GENERAL-LEDGER Rules
 - ALL Record Type Rules
 - General Event Handlers
 - BeforeMap
 - AfterMap
 - BeforePutRecord
 - AfterPutRecord
 - BeforePutTree
 - AfterPutTree
 - BeforeInsertRecord

(ASCII (Fixed)) Source Record Type: IFAS-JV-DOCH

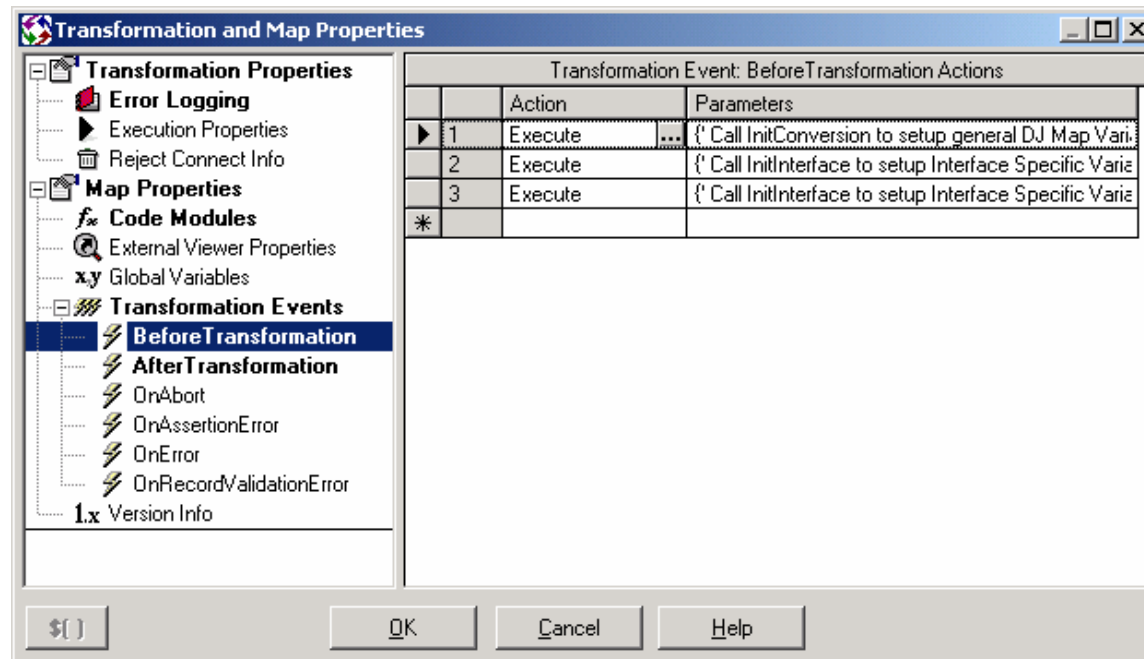
	Source Field Name	Description	Type	Size	Contents(Rec 1)
*	<all fields>				
1	RECORD-TYPE		Text	1	D
2	PAGE-TYPE		Text	1	
3	BAT-TRANS-CODE		Text	4	
4	BAT-AGENCY		Text	4	
5	BATCH-NUMBER		Text	6	
6	DOC-TRANS-CODE		Text	4	JV
7	DOC-AGENCY		Text	4	125
8	DOC-NUMBER		Text	11	FS040700001
9	FILLER		Text	1	
10	TRANS-CODE		Text	2	JV
11	TRANS-NUMBER		Text	14	FS040700001
12	RECORD-MONTH		Text	2	
13	RECORD-DAY		Text	2	
14	RECORD-YEAR		Text	2	
15	FISC-MONTH		Text	2	07
16	FISC-YEAR		Text	2	04
17	BUDGET-FY		Text	2	04

(Binary) Target Record Type: EXTENDED-GENERAL-LEDGER

	Target Field Name	Target Field Expression	Description
1	CONV-IND	=	
2	LEDGER-ID	=gsInterfaceID	
3	MAP-ID	= ' Not Assigned in Phase 1	
4	LEDGER-ORDER	=	
5	COMPONENT-LEVEL	= ' Not Assigned in Phase 1	
6	COMPONENT-PARENT	= ' Not Assigned in Phase 1	
7	COMPONENT-ORDER	= ' Not Assigned in Phase 1	
8	TRANS-GRP-ID	= ' Not Assigned in Phase 1	
9	2X-TRANS-CODE	=Records("IFAS-JV-DOCL").Fields("DOC-TRANS-COD	
10	2X-TRANS-NUMBER	=Records("IFAS-JV-DOCL").Fields("DOC-NUMBER")	
11	2X-LINE-NUMBER	=	
12	AD30-DOC-CD	= ' Not Assigned in Phase 1	
13	AD30-DOC-DEPT-CD	=Records("IFAS-JV-DOCH").Fields("DOC-AGENCY")	
14	AD30-DOC-UNIT-CD	= ' Not Assigned in Phase 1	
15	AD30-DOC-ID	= ' Not Assigned in Phase 1	

INS

View Transformation and Map Properties



View Source Rules/Actions...

- Record Type Rules

Record Discriminator <input type="text" value="Records('IFAS-JV-DOCH').Fields('RECORD-TYPE')"/> <input type="button" value="Generate Rules"/>									
▶ (ASCII (Fixed)) Source Record Recognition Rules, Discriminator-> Data Type: Text, Offset: 1, Length: 1									
		Discr	Operator	Value	High Value	Case	Record Type	Rule Name	Description
▶	1	Discr	=	D		<input checked="" type="checkbox"/>	IFAS-JV-DOCH	RecordRule1	
	2	Discr	=	L		<input checked="" type="checkbox"/>	IFAS-JV-DOCL	RecordRule2	
*						<input type="checkbox"/>			

- All Source Event Actions

▶ All Source Event Actions					
	Record Name	Event Name	No.	Action	Parameters
▶	IFAS-JV-DOCH	AfterEveryRecord	1	Clear	{Target},{EXTENDED-GENERAL
	IFAS-JV-DOCH	AfterEveryRecord	2	Execute	{giNumDocs = giNumDocs + 1} Ir
	IFAS-JV-DOCL	AfterEveryRecord	1	MapPut Record	{Target},{EXTENDED-GENERAL
*					

View Target Actions ... Contd ...

- All Target Event Actions

● All Target Event Actions					
	Record Name	Event Name	No.	Action	Parameters
▶		AfterMap	1	Execute	{If Targets(0).Records("EXTEND
		BeforePutRecord	1	Execute	{Targets(0).Records("EXTENDED
*					

- gbCommitInterfaceTrans

```
giNumDocs = giNumDocs + 1  
' Initialize Keep Status for each new document to True (Anything later can set this flag to false)  
gbCommitInterfaceTrans = 1
```

View Target Data

- Look at the target data by opening the Target Data Browser

Target Data Browser--> .\data\intermed\doc_int_jv_prepped

Masked Text 500 ?

Record No	CD	LEDGER-ID	MAP-ID	LEDGER-OF	COMPONEN	COMPONEN	COMPONEN	TRANS-GRP-II	Z-X-TRA	Z-X-TRANS-NUMBE	Z-X-LI	AD30-C	AD30-C	AD30-DOC-ID
1	1	INT_JV_FLE		1	0	0	0	JV	FS040700001			125		
2	1	INT_JV_FLE		1	0	0	0	JV	FS040700001			125		
3	1	INT_JV_FLE		2	0	0	0	JV	FS040700002			125		
4	1	INT_JV_FLE		2	0	0	0	JV	FS040700002			125		
5	1	INT_JV_FLE		2	0	0	0	JV	FS040700002			125		
6	1	INT_JV_FLE		2	0	0	0	JV	FS040700002			125		
7	1	INT_JV_FLE		2	0	0	0	JV	FS040700002			125		
8	1	INT_JV_FLE		2	0	0	0	JV	FS040700002			125		
9	1	INT_JV_FLE		2	0	0	0	JV	FS040700002			125		
10	1	INT_JV_FLE		2	0	0	0	JV	FS040700002			125		
11	1	INT_JV_FLE		2	0	0	0	JV	FS040700002			125		
12	1	INT_JV_FLE		2	0	0	0	JV	FS040700002			125		
13	1	INT_JV_FLE		2	0	0	0	JV	FS040700002			125		
14	1	INT_JV_FLE		2	0	0	0	JV	FS040700002			125		
15	1	INT_JV_FLE		2	0	0	0	JV	FS040700002			125		
16	1	INT_JV_FLE		2	0	0	0	JV	FS040700002			125		
17	1	INT_JV_FLE		2	0	0	0	JV	FS040700002			125		
18	1	INT_JV_FLE		2	0	0	0	JV	FS040700002			125		
19	1	INT_JV_FLE		2	0	0	0	JV	FS040700002			125		
20	1	INT_JV_FLE		2	0	0	0	JV	FS040700002			125		
21	1	INT_JV_FLE		3	0	0	0	JV	FS040700003			125		
22	1	INT_JV_FLE		3	0	0	0	JV	FS040700003			125		
23	1	INT_JV_FLE		4	0	0	0	JV	FS040700004			125		
24	1	INT_JV_FLE		4	0	0	0	JV	FS040700004			125		
25	1	INT_JV_FLE		4	0	0	0	JV	FS040700004			125		
26	1	INT_JV_FLE		4	0	0	0	JV	FS040700004			125		
27	1	INT_JV_FLE		4	0	0	0	JV	FS040700004			125		
28	1	INT_JV_FLE		4	0	0	0	JV	FS040700004			125		
29	1	INT_JV_FLE		4	0	0	0	JV	FS040700004			125		
30	1	INT_JV_FLE		4	0	0	0	JV	FS040700004			125		
31	1	INT_JV_FLE		4	0	0	0	JV	FS040700004			125		
32	1	INT_JV_FLE		4	0	0	0	JV	FS040700004			125		
33	1	INT_JV_FLE		5	0	0	0	JV	FS040700005			125		
34	1	INT_JV_FLE		5	0	0	0	JV	FS040700005			125		
35	1	INT_JV_FLE		5	0	0	0	JV	FS040700005			125		
36	1	INT_JV_FLE		5	0	0	0	JV	FS040700005			125		
37	1	INT_JV_FLE		6	0	0	0	JV	FS040700006			125		
38	1	INT_JV_FLE		6	0	0	0	JV	FS040700006			125		

Records 1-500

Record No: 1 Page 1 of ?

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VALIDATE Step

- INF_INT_VALIDATE_LGL (NO NEED TO CHANGE)

Map Designer: xmldb:ref:///C:/AMSADV34/Utils/ADVCFN/djrepos/INF_INT_VALIDATE_LGL.map.xml (Workspace: Workspace1)

File Connection View Tools Add-Ins Help

Source Connection Target Connection Map

Data Change Monitor: Records("EXTENDED-GENERAL-LEDGER").Fields() Fire first ODC event/Suppress extra OD

(Binary) Source Record: EXTENDED-GENERAL-LEDGER, Event: OnDataChange1, Actions

	Action	Parameters
1	Execute	{If Trim(Records("EXTENDED-GENERAL-LEDGER").Fields("CONV-IND")) = 1 Then bK}

(Binary) Target Record Type: EXTENDED-GENERAL-LEDGER

	Target Field Name	Target Field Expression	Description
1	CONV-IND	=Fields("CONV-IND")	
2	LEDGER-ID	=Fields("LEDGER-ID")	
3	MAP-ID	=Fields("MAP-ID")	
4	LEDGER-ORDER	=Fields("LEDGER-ORDER")	
5	COMPONENT-LEVEL	=Fields("COMPONENT-LEVEL")	
6	COMPONENT-PARENT	=Fields("COMPONENT-PARENT")	
7	COMPONENT-ORDER	=Fields("COMPONENT-ORDER")	
8	TRANS-GRP-ID	=Fields("TRANS-GRP-ID")	
9	2X-TRANS-CODE	=Fields("2X-TRANS-CODE")	
10	2X-TRANS-NUMBER	=Fields("2X-TRANS-NUMBER")	
11	2X-LINE-NUMBER	=Fields("2X-LINE-NUMBER")	
12	AD30-DOC-CD	=Fields("AD30-DOC-CD")	
13	AD30-DOC-DEPT-CD	=Fields("AD30-DOC-DEPT-CD")	

1 INS

VALIDATE Step

Contd ...

- INF_INT_VALIDATE_LGL (NO NEED TO CHANGE)

```
If Trim(Records("EXTENDED-GENERAL-LEDGER").Fields("CONV-IND")) = 1 Then  
    bKeepDocument = True  
Else  
    bKeepDocument = False  
End If
```

Source Sort Expressions and Keys

Sort Options | Keys

Sort Keys				
	Key Expression	Ascending	Data Type	Length
▶	Fields("LEDGER-ID")	yes	Text	10
	Fields("LEDGER-OR	yes	Long Integer	4
	Fields("CONV-IND")	yes	Short Integer	2
*				

☒ Allow Duplicate Records

OK Cancel Help

MAP Step

- DOC_INT_JV_JVA_MAP

Map Designer: xmldb:ref:///C:/AMSADY34/Utils/ADYCVNFN/djrepos/DOC_INT_JV_JVA_MAP.map.xml (Workspace: Workspace1)

File Connection View Tools Add-Ins Help

Source Connection Target Connection Map

Source

- All Fields
- All Event Actions
- Record Types
 - EXTENDED-GENERAL-LEDGER
 - EXTENDED-GENERAL-LEDGER Event Handlers
 - EXTENDED-GENERAL-LEDGER Fields
 - EXTENDED-GENERAL-LEDGER Rules
- ALL Record Type Rules
- General Event Handlers

(Binary) Source Record Type: EXTENDED-GENERAL-LEDGER

	Source Field Name	Description	Type	Size	Contents(Rec 1)
*	<all fields>				
1	CONV-IND		Display	1	1
2	LEDGER-ID		Display	10	INT_JV_FLE
3	MAP-ID		Display	10	
4	LEDGER-ORDER		Zoned decimal	8	1
5	COMPONENT-LEVEL		Zoned decimal	8	0
6	COMPONENT-PARENT		Zoned decimal	8	0
7	COMPONENT-ORDER		Zoned decimal	8	0
8	TRANS-GRP-ID		Display	10	
9	2X-TRANS-CODE		Display	4	JV
10	2X-TRANS-NUMBER		Display	14	FS040700001
11	2X-LINE-NUMBER		Display	2	
12	AD30-DOC-CD		Display	4	
13	AD30-DOC-DEPT-CD		Display	4	125
14	AD30-DOC-UNIT-CD		Display	4	
15	AD30-DOC-ID		Display	20	
16	AD30-LINE-NO		Zoned decimal	10	0

Target

- All Fields
- All Event Actions
- Record Types
 - JV-DOC-HDR
 - JV-DOC-HDR Event Handlers
 - JV-DOC-HDR Fields
 - JV-DOC-HDR Rules
- JV-DOC-LNGRP
- JV-DOC-LNGRP Event Handlers
- JV-DOC-LNGRP Fields
- JV-DOC-LNGRP Rules
- JV-DOC-ACTG
- JV-DOC-ACTG Event Handlers
- JV-DOC-ACTG Fields
- JV-DOC-ACTG Rules
- ALL Record Type Rules
- General Event Handlers

(Binary Line Sequential) Target Record Type: JV-DOC-HDR

	Target Field Name	Target Field Expression	Description
1	CONV-IND	= 'Event Handler' Populated in Target BeforePutReco	
2	LEDGER-ID	= 'Global Interface ID' from Before Conversion Events	
3	MAP-ID	= 'Global 3x Doc Code I' from Before Conversion Ever	
4	LEDGER-ORDER	=Records("EXTENDED-GENERAL-LEDGER").Fields('	
5	COMPONENT-LEVEL	= 'Global Header Component Value I' From INI file via	
6	COMPONENT-PARENT	= 'Not Mapped'Header level records do Not have pare	
7	COMPONENT-ORDER	= 'Global counter used to ensure XML can be sorted in	
8	TRANS-GRP-ID	= 'Global Transaction Group ID Value I' From INI file vi	
9	2X-TRANS-CODE	=Records("EXTENDED-GENERAL-LEDGER").Fields('	
10	2X-TRANS-NUMBER	=Records("EXTENDED-GENERAL-LEDGER").Fields('	
11	2X-LINE-NUMBER	=Records("EXTENDED-GENERAL-LEDGER").Fields('	
12	AD30-DOC-CD	= 'Global 3x Doc Code I' from Before Conversion Ever	
13	AD30-DOC-DEPT-CD	=Records("EXTENDED-GENERAL-LEDGER").Fields('	
14	AD30-DOC-UNIT-CD	=	
15	AD30-DOC-ID	= 'Global 3x Document ID - Set in Source Data Chang	
16	AD30-LINE-NO	= 'Field only used for accounting line level	

1 INS

View Target Rules ...

- Record Type Rules

Record Discriminator: Records("JV-DOC-HDR").Fields("COMPONENT-LE" ▾) Generate Rules									
(Binary Line Sequential) Target Record Recognition Rules, Discriminator-> Data Type: Zoned decimal, Offset: 37,									
	Discr	Operator	Value	High Value	Case	Record Type	Rule Name	Description	
▶ 1	Discr	=	5		<input checked="" type="checkbox"/>	JV-DOC-ACTG	RecordRule1		
2	Discr	=	3		<input checked="" type="checkbox"/>	JV-DOC-LNGRF	RecordRule2		
3	Discr	=	1		<input checked="" type="checkbox"/>	JV-DOC-HDR	RecordRule3		
*					<input type="checkbox"/>				

Source and Target Event Actions

- Source Event Actions

	Record Name	Event Name	No.	Action	Parameters
▶		AfterEveryRecord	1	Execute	{' Increment Lowest Level Child (
		AfterEveryRecord	2	ClearMapPut Re	{Target},{JV-DOC-ACTG},{0},{0}
	EXTENDED-GENE	OnDataChange1	1	Put Record	{Target},{JV-DOC-LNGRP},{0},{0}
	EXTENDED-GENE	OnDataChange1	2	Execute	{' Increment the LNGRP here in th
	EXTENDED-GENE	OnDataChange2	1	Execute	{' Increment Global Variable - Acci
	EXTENDED-GENE	OnDataChange2	2	ClearMap	{Target},{JV-DOC-LNGRP},{0},{0}
	EXTENDED-GENE	OnDataChange3	1	Put Record	{Target},{JV-DOC-HDR},{0},{0}
	EXTENDED-GENE	OnDataChange3	2	Execute	{' Reset Document Child Componen
	EXTENDED-GENE	OnDataChange4	1	Execute	{' Increment Global Variable - Nurr
	EXTENDED-GENE	OnDataChange4	2	ClearMap	{Target},{JV-DOC-HDR},{0},{0}
*					

- Target Event Actions

All Target Event Actions					
	Record Name	Event Name	No.	Action	Parameters
▶	JV-DOC-ACTG	BeforePutRecord	1	Execute	{' Infrastructure Counter Field for X
	JV-DOC-ACTG	BeforePutRecord	2	Execute	{' Record the document level rejec
	JV-DOC-HDR	BeforePutRecord	1	Execute	{' Infrastructure Counter Field for X
	JV-DOC-HDR	BeforePutRecord	2	Execute	{' Record the document level rejec
	JV-DOC-LNGRP	BeforePutRecord	1	Execute	{' Infrastructure Counter Field for X
	JV-DOC-LNGRP	BeforePutRecord	2	Execute	{' Record the document level rejec
*					

Map Failures Step

- INF_INT_RM_MAP_FAILURES (NO NEED TO CHANGE)

Map Designer: xmldb:ref:///C:/AMSADV34/Utils/ADVCMFN/djrepos/INF_INT_RM_MAP_FAILURES.map.xml (Workspace: Workspace1)

File Connection View Tools Add-Ins Help

Source Connection Target Connection Map

Source (Binary Line Sequential) Source Record Type: EXTENDED-CONTROL-FIELDS

Source Field Name	Description	Type	Size	Contents(Rec 1)
* <all fields>				
1 CONV-IND		Display	1	1
2 LEDGER-ID		Display	10	INT_JV
3 MAP-ID		Display	10	JVA
4 LEDGER-ORDER		Zoned decimal	8	1
5 COMPONENT-LEVEL		Zoned decimal	8	5
6 COMPONENT-PARENT		Zoned decimal	8	3
7 COMPONENT-ORDER		Zoned decimal	8	1
8 TRANS-GRP-ID		Display	10	JV
9 Zx-TRANS-CODE		Display	4	JV
10 Zx-TRANS-NUMBER		Display	14	FS040700001
11 Zx-LINE-NUMBER		Display	2	
12 AD30-DOC-CD		Display	4	JVA
13 AD30-DOC-DEPT-CD		Display	4	125
14 AD30-DOC-UNIT-CD		Display	4	
15 AD30-DOC-ID		Display	20	JVAFS040700001
16 AD30-LINE-NO		Zoned decimal	10	1
17 UDF-1		Display	30	
18 UDF-2		Display	30	

Target (Binary Line Sequential) Target Record Type: EXTENDED-CONTROL-FIELDS

Target Field Name	Target Field Expression	Description
1 CONV-IND	=If bDocumentsOkay Then 1 Else 0 End If	
2 LEDGER-ID	=Fields("LEDGER-ID")	
3 MAP-ID	=Fields("MAP-ID")	
4 LEDGER-ORDER	=Fields("LEDGER-ORDER")	
5 COMPONENT-LEVEL	=Fields("COMPONENT-LEVEL")	
6 COMPONENT-PARENT	=Fields("COMPONENT-PARENT")	
7 COMPONENT-ORDER	=Fields("COMPONENT-ORDER")	
8 TRANS-GRP-ID	=Fields("TRANS-GRP-ID")	
9 Zx-TRANS-CODE	=Fields("Zx-TRANS-CODE")	
10 Zx-TRANS-NUMBER	=Fields("Zx-TRANS-NUMBER")	
11 Zx-LINE-NUMBER	=Fields("Zx-LINE-NUMBER")	
12 AD30-DOC-CD	=Fields("AD30-DOC-CD")	
13 AD30-DOC-DEPT-CD	=Fields("AD30-DOC-DEPT-CD")	
14 AD30-DOC-UNIT-CD	=Fields("AD30-DOC-UNIT-CD")	

Map Failures Step

Contd ...

- INF_INT_RM_MAP_FAILURES (NO NEED TO CHANGE)

Key Expression	Ascending	Data Type	Length
Fields("LEDGER-ID")	yes	Text	10
Fields("LEDGER-OR	yes	Long Integer	4
Fields("CONV-IND")	yes	Short Integer	2
*			

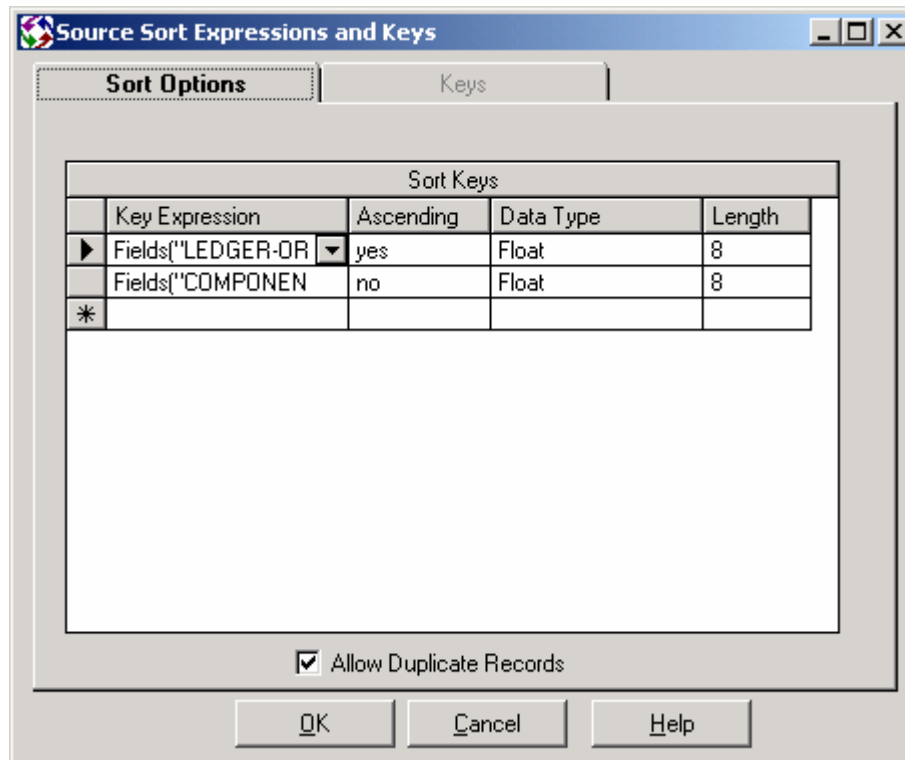
☒ Allow Duplicate Records

- bDocumentIsOkay

```
If Trim(Records("EXTENDED-CONTROL-FIELDS").Fields("CONV-IND")) = "1" Then
    bDocumentIsOkay = True
Else
    bDocumentIsOkay = False
End If
```

Sort Step

- INF_INT_SORT (NO NEED TO CHANGE)



The dialog box titled "Source Sort Expressions and Keys" has two tabs: "Sort Options" and "Keys". The "Sort Options" tab is active. It contains a table with the following data:

Sort Keys				
	Key Expression	Ascending	Data Type	Length
▶	Fields("LEDGER-OR" ▼)	yes	Float	8
	Fields("COMPONEN	no	Float	8
*				

Below the table is a large empty rectangular area. At the bottom of the dialog, there is a checkbox labeled "Allow Duplicate Records" which is checked. At the very bottom are three buttons: "OK", "Cancel", and "Help".

XML Step

- DOC_INT_JV_JVA_XML

XML Properties	
Property	Value
Encoding	ISO-8859-1
ByteOrder	Auto
WriteXMLDecl	True
WriteDTD	None
DTDFile	
ProcessingInstructions	
InternalSubset	
DoctypeName	AMS_DOC_XML_EXPORT_F
WriteEmpty	True
WriteEmptyAttr	True
RetainRecordOrder	False
Formatted	True

Apply Restore

XML Step

Contd ...

- DOC_INT_JV_JVA_XML

Map Designer: xmldbref:///C:/AMSADY34/Utils/ADVCMFN/djrepos/DOC_INT_JV_JVA_XML.map.xml (Workspace: Workspace1)

File Connection View Tools Add-Ins Help

Source Connection Target Connection Map

All Event Actions

- Record Types
 - JV-DOC-HDR
 - JV-DOC-HDR Event Handlers
 - BeforeEveryRecord
 - AfterEveryRecord
 - BeforeFirstRecord
 - AfterFirstRecord
 - Data Change Events
 - JV-DOC-HDR Fields
 - JV-DOC-HDR Rules
 - JV-DOC-LNGRP
 - JV-DOC-LNGRP Event Handlers
 - JV-DOC-LNGRP Fields
 - JV-DOC-LNGRP Rules
 - JV-DOC-CTG
 - JV-DOC-CTG Event Handlers

All Source Event Actions

Record Name	Event Name	No.	Action	Parameters
JV-DOC-CTG	AfterEveryRecord	1	ClearMapPut Re	{Target}.JV_DOC_CTG}.0.0.0
JV-DOC-HDR	AfterEveryRecord	1	ClearMapPut Re	{Target}.AMS-DOC-HEADER}.0.
JV-DOC-HDR	AfterEveryRecord	2	ClearMapPut Re	{Target}.JV_DOC_HDR}.0.0.0
JV-DOC-HDR	OnDataChange1	1	Execute	{Targets[0].Records("AMS-DOC-Header")}
JV-DOC-HDR	OnDataChange1	2	Put Record	{Target}.AMS-DOC-HEADER}.0.
JV-DOC-LNGRP	AfterEveryRecord	1	ClearMapPut Re	{Target}.JV_DOC_LNGRP}.0.0.

Target

- All Fields
- All Event Actions
 - Record Types
 - AMS-DOC-HEADER
 - AMS-DOC-HEADER Event Handlers
 - AMS-DOC-HEADER Fields
 - AMS-DOC-HEADER Rules
 - JV_DOC_HDR
 - JV_DOC_HDR Event Handlers
 - JV_DOC_HDR Fields
 - JV_DOC_HDR Rules
 - JV_DOC_LNGRP
 - JV_DOC_LNGRP Event Handlers
 - JV_DOC_LNGRP Fields
 - JV_DOC_LNGRP Rules
 - JV_DOC_CTG
 - JV_DOC_CTG Event Handlers
 - JV_DOC_CTG Fields
 - JV_DOC_CTG Rules

All Target Event Actions

Record Name	Event Name	No.	Action	Parameters
JV_DOC_CTG	BeforePutRecord	1	Execute	{TrimTgtFlds("JV_DOC_CTG")}
JV_DOC_HDR	BeforePutRecord	1	Execute	{TrimTgtFlds("JV_DOC_HDR")}
JV_DOC_LNGRP	BeforePutRecord	1	Execute	{TrimTgtFlds("JV_DOC_LNGRP")}

INS

XML Step

Contd ...

- Record Type Rules

Record Discriminator						Records("JV-DOC-ACTG").Fields("COMPONENT-LE")	Generate Rules		
(Binary Line Sequential) Source Record Recognition Rules, Discriminator-> Data Type: Zoned decimal, Offset: 37,									
		Discr	Operator	Value	High Value	Case	Record Type	Rule Name	Description
▶	1	Discr	=	1		<input checked="" type="checkbox"/>	JV-DOC-HDR	RecordRule1	
	2	Discr	=	3		<input checked="" type="checkbox"/>	JV-DOC-LNGRF	RecordRule2	
	3	Discr	=	5		<input checked="" type="checkbox"/>	JV-DOC-ACTG	RecordRule3	
*						<input type="checkbox"/>			

- Source Event Actions

All Source Event Actions					
	Record Name	Event Name	No.	Action	Parameters
▶	JV-DOC-ACTG	AfterEveryRecord	1	ClearMapPut Re	{Target},{JV_DOC_ACTG},{},{}
	JV-DOC-HDR	AfterEveryRecord	1	ClearMapPut Re	{Target},{AMS-DOC-HEADER},{},{}
	JV-DOC-HDR	AfterEveryRecord	2	ClearMapPut Re	{Target},{JV_DOC_HDR},{},{}
	JV-DOC-HDR	OnDataChange1	1	Execute	{Targets(0).Records("AMS-DOC-"
	JV-DOC-HDR	OnDataChange1	2	Put Record	{Target},{AMS-DOC-HEADER},{},{}
	JV-DOC-LNGRP	AfterEveryRecord	1	ClearMapPut Re	{Target},{JV_DOC_LNGRP},{},{}
*					

- Target Event Actions

All Target Event Actions					
	Record Name	Event Name	No.	Action	Parameters
▶	JV_DOC_ACTG	BeforePutRecord	1	Execute	{RTrimTgtFlds("JV_DOC_ACTG")}
	JV_DOC_HDR	BeforePutRecord	1	Execute	{RTrimTgtFlds("JV_DOC_HDR")}
	JV_DOC_LNGRP	BeforePutRecord	1	Execute	{RTrimTgtFlds("JV_DOC_LNGRP")}
*					

INFRASTRUCTURE XML Step

- INF_INT_DItoADV_xml_xml (NO NEED TO CHANGE)

Map Designer: xmldbref:///C:/AMSADV34/Utils/ADVCFNF/djreps/INF_INT_DItoADV_xml_xml.map.xml (Workspace: Workspace1)

File Connection View Tools Add-Ins Help

Source Connection Target Connection Map

Source

- All Fields
- All Event Actions
- Record Types
 - R1
 - R1 Event Handlers
 - BeforeEveryRecord
 - AfterEveryRecord
 - BeforeFirstRecord
 - AfterFirstRecord
 - Data Change Events
 - R1 Fields
 - R1 Rules
 - ALL Record Type Rules
 - General Event Handlers

All Source Event Actions

Record Name	Event Name	No.	Action	Parameters
R1	AfterEveryRecord	1	ClearMapPut Re	{Target},{R1},{0,0,0}

Target

- All Fields
- All Event Actions
- Record Types
 - R1
 - R1 Event Handlers
 - R1 Fields
 - R1 Rules
 - ALL Record Type Rules
 - General Event Handlers

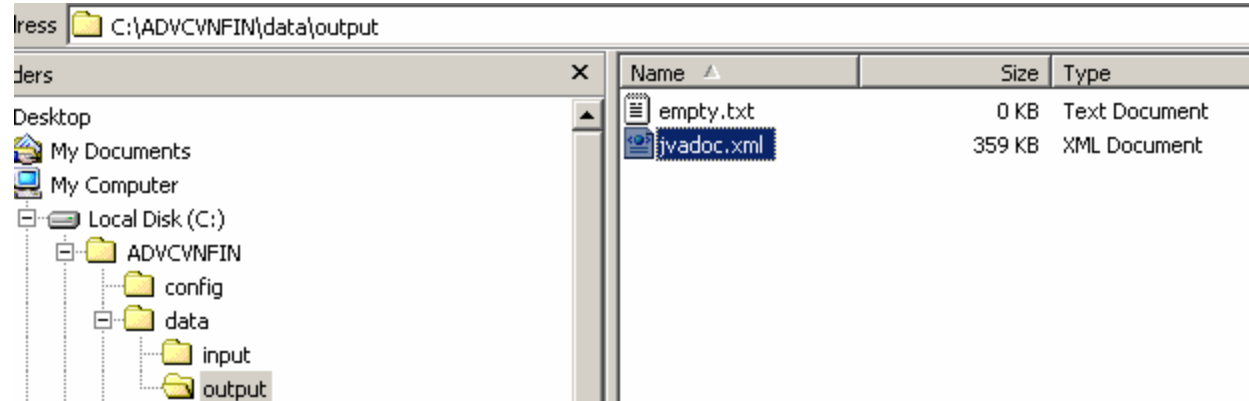
(ASCII (Delimited)) Target Record Type: R1

	Target Field Name	Target Field Expression	Description	T
1	Field1	" This code was written to build the properly formatted		T

```
sDefaultDateTime = now()
sDataObjectName = "#####
sEndFieldsMarker = "#####
sAttributeString = " Attribute="Y"><![CDATA["
```

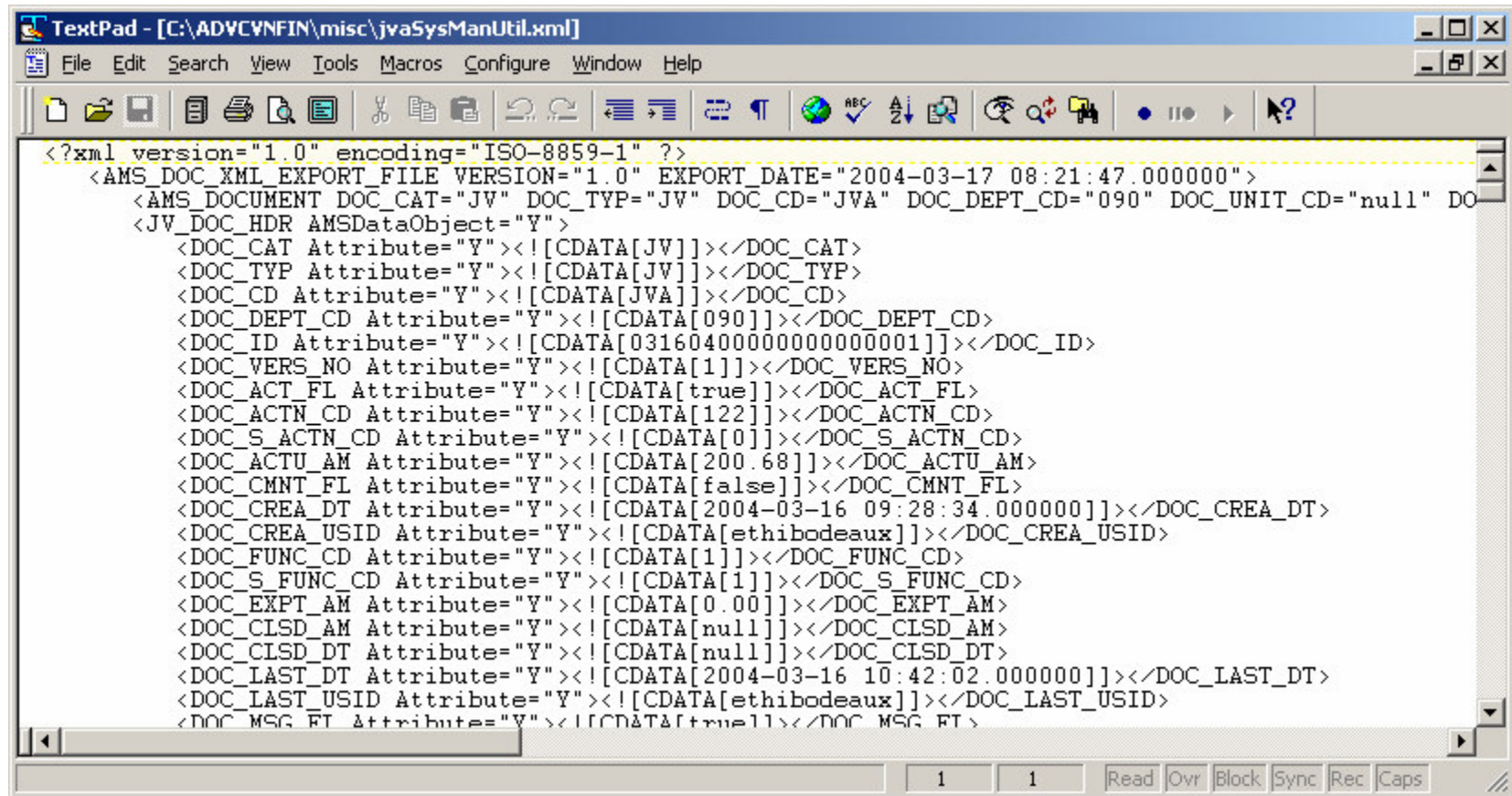
Conversion

- View output XML file



View XML from Sysmanutil

- Look at tags from the XML



```
<?xml version="1.0" encoding="ISO-8859-1" ?>
<AMS_DOC_XML_EXPORT_FILE VERSION="1.0" EXPORT_DATE="2004-03-17 08:21:47.000000">
  <AMS_DOCUMENT DOC_CAT="JV" DOC_TYP="JV" DOC_CD="JVA" DOC_DEPT_CD="090" DOC_UNIT_CD="null" DO
  <JV_DOC_HDR AMSDataObject="Y">
    <DOC_CAT Attribute="Y"><![CDATA[JV]]></DOC_CAT>
    <DOC_TYP Attribute="Y"><![CDATA[JV]]></DOC_TYP>
    <DOC_CD Attribute="Y"><![CDATA[JVA]]></DOC_CD>
    <DOC_DEPT_CD Attribute="Y"><![CDATA[090]]></DOC_DEPT_CD>
    <DOC_ID Attribute="Y"><![CDATA[031604000000000000000001]]></DOC_ID>
    <DOC_VERS_NO Attribute="Y"><![CDATA[1]]></DOC_VERS_NO>
    <DOC_ACT_FL Attribute="Y"><![CDATA[true]]></DOC_ACT_FL>
    <DOC_ACTN_CD Attribute="Y"><![CDATA[122]]></DOC_ACTN_CD>
    <DOC_S_ACTN_CD Attribute="Y"><![CDATA[0]]></DOC_S_ACTN_CD>
    <DOC_ACTU_AM Attribute="Y"><![CDATA[200.68]]></DOC_ACTU_AM>
    <DOC_CMNT_FL Attribute="Y"><![CDATA[false]]></DOC_CMNT_FL>
    <DOC_CREA_DT Attribute="Y"><![CDATA[2004-03-16 09:28:34.000000]]></DOC_CREA_DT>
    <DOC_CREA_USID Attribute="Y"><![CDATA[ethibodeaux]]></DOC_CREA_USID>
    <DOC_FUNC_CD Attribute="Y"><![CDATA[1]]></DOC_FUNC_CD>
    <DOC_S_FUNC_CD Attribute="Y"><![CDATA[1]]></DOC_S_FUNC_CD>
    <DOC_EXPT_AM Attribute="Y"><![CDATA[0.00]]></DOC_EXPT_AM>
    <DOC_CLSD_AM Attribute="Y"><![CDATA[null]]></DOC_CLSD_AM>
    <DOC_CLSD_DT Attribute="Y"><![CDATA[null]]></DOC_CLSD_DT>
    <DOC_LAST_DT Attribute="Y"><![CDATA[2004-03-16 10:42:02.000000]]></DOC_LAST_DT>
    <DOC_LAST_USID Attribute="Y"><![CDATA[ethibodeaux]]></DOC_LAST_USID>
    <DOC_MSG_FL Attribute="Y"><![CDATA[true]]></DOC_MSG_FL>
```

Miscellaneous



External Code Module

- Each document conversion should contain a code module for its specific logic
- The name of the code module should have an association to the functional area

Build DOS Batch File

- The DOS Batch file will be used to run all of the necessary items for a certain functional area
- A call to run Conversion Maps to seed the support tables should reside in batch file
- Calls to the infrastructure maps should be called

Send Mail

- Ability to send mail giving process of conversion
- Send e-mail alerts at the conclusion (successful or unsuccessful) of a Map
- External utility

```
*** Execution End: [S_TAB_FQTR_2xbin_3xorc] completed successfully
*** Execution Statistics: [S_TAB_FQTR_2xbin_3xorc] executed in 3 minutes, 7.17 seconds
*** Execution Statistics: [S_TAB_FQTR_2xbin_3xorc] Total records read: 29665
*** Execution Statistics: [S_TAB_FQTR_2xbin_3xorc] Total records written: 29179
*** Execution Statistics: [S_TAB_FQTR_2xbin_3xorc] Total reject records written: 0
*** Execution Statistics: [S_TAB_FQTR_2xbin_3xorc] Total records inserted: 29179
*** Execution Statistics: [S_TAB_FQTR_2xbin_3xorc] Total records updated: 0
*** Execution Statistics: [S_TAB_FQTR_2xbin_3xorc] Total records deleted: 0
*** Execution Statistics: [S_TAB_FQTR_2xbin_3xorc] Total records discarded: 486
*** Execution Statistics: [S_TAB_FQTR_2xbin_3xorc] Total records rejected: 0
*** Execution Statistics: [S_TAB_FQTR_2xbin_3xorc] Total error count: 0
Conversion unloaded.
```

Options

- Can run conversion outside DI studio, using the Integration Engine
- Helps performance since the studio is not open
- License allows for both engine and studio to be open

Some .bat files

- Call maps from the dos prompt
 - RDImap.bat
 - StandardInterface_JV_FLEETJV.bat
 - Step1A_transform_all_coa_tables.bat
 - Step2A_transform_all_comm_tables.bat
 - DIBuild_Conv_Inf.bat

Questions

